

FFY 2020 Massachusetts Highway Safety Plan

Office of Grants and Research



Office of Grants and Research

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To learn more about:

NHTSA - <https://www.nhtsa.gov/>

FAST Act - <https://www.gpo.gov/fdsys/pkg/PLAW-114publ94/pdf/PLAW-114publ94.pdf>

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Introduction to the FFY 2020 Highway Safety Plan

On behalf of Governor Charles Baker and Lt. Governor Karyn Polito of the Commonwealth of Massachusetts, the Executive Office of Public Safety and Security's (EOPSS), Office of Grants and Research (OGR) is pleased to present our Federal Fiscal Year (FFY) 2020 Highway Safety Plan (HSP) for consideration of funding. This document outlines our program priority areas, identifies performance targets, and discusses proposed initiatives. This HSP serves as the framework for the implementation of countermeasures with highway safety partners across the Commonwealth.

Under the supervision of the Executive Director, OGR's Highway Safety Division (HSD) is responsible for the development, implementation, coordination, and ongoing management of the Massachusetts highway safety program. This includes a leadership role in identifying traffic safety priorities and working with partners to develop programs and initiatives to address ongoing and shifting highway safety needs.

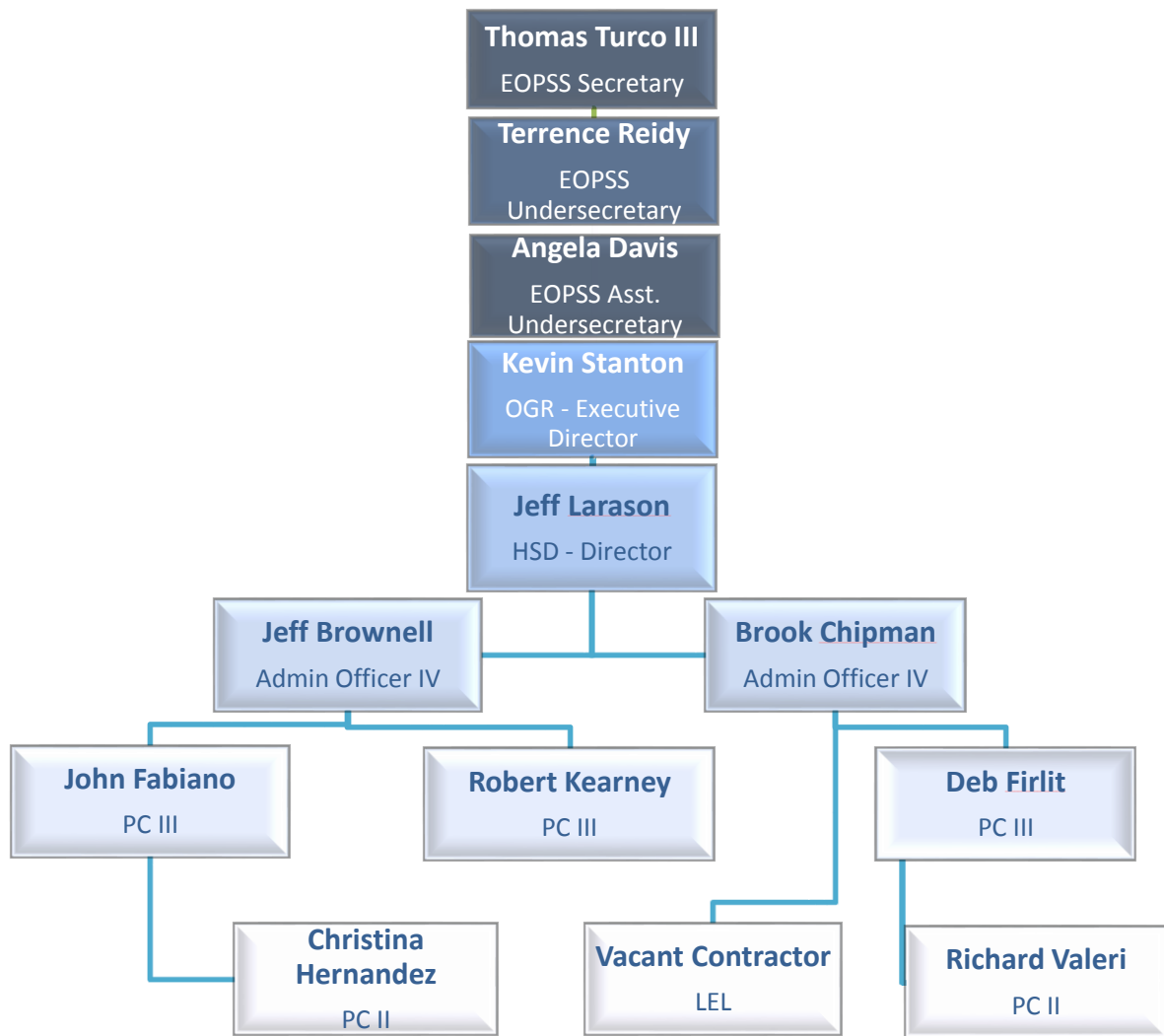
Current OGR Organization

OGR has approximately 30-36 full-time staff at any given time. On behalf of EOPSS, OGR serves as the state administering agency for the National Highway Traffic Safety Administration, Department of Justice and Federal Emergency Management Agency funds awarded to the Commonwealth. OGR is divided into 5 divisions-HSD, Justice and Prevention Division, Research Policy and Analysis Division, Homeland Security Division and the Fiscal Division. The structure provided on the following page is as of June 30, 2019, and it reflects EOPSS and OGR leadership, and *only* the Highway Safety unit within OGR.

Staffing Updates

Joining HSD:	In August 2018, Christina Hernandez was hired as a Program Coordinator II. Prior to joining OGR, Christina worked for the Illinois Criminal Justice Information Authority in Chicago handling Victims of Crime Act (VOCA) grant programs.
Leaving HSD:	Chief (Ret.) Edward O'Leary, Law Enforcement Liaison left in June 2018.

Organizational Chart of the HSD within OGR



Mission Statement

The mission of the OGR as it pertains solely to highway safety is to facilitate the development and implementation of policies, programs, and partnerships to help reduce fatalities, injuries, and economic losses resulting from motor vehicle crashes on the roadways of the Commonwealth of Massachusetts.

Highway Safety Program Overview

Within the Commonwealth of Massachusetts, OGR is responsible for planning, implementing, and evaluating highway safety projects with federal and non-federal funds. This agency also coordinates the efforts of federal, state, and local organizations involved with highway safety in Massachusetts.

This FFY 2020 HSP serves as the Commonwealth of MA application to NHTSA for federal funds available under the Fixing America's Surface Transportation (FAST) Act transportation bill. Other sources of funds include cooperative agreements with NHTSA for the Fatality Analysis Reporting System project and private funds donated to the Highway Safety Trust Fund.

To identify the issues to be addressed in the FFY 2020 HSP, OGR relied primarily on 2013 to 2017 trend data, and also considered preliminary 2018 data, when available.

The program planning throughout this HSP may be altered depending on the levels of funding received or evolving priorities. The agency will submit any changes to the HSP to NHTSA Region 1 personnel for review and approval.

Partnerships

To help further enhance high safety in Massachusetts, OGR engages in many partnerships including, but not limited to:

AAA Northeast
Alcoholic Beverages Control Commission
Beth Israel Hospital
Boston Emergency Medical Services
Boston Medical Center
Boston Transportation Department
Brain Injury Association
Councils on Aging
Massachusetts Executive Office of Elder Affairs
Massachusetts Executive Office of Health and Human Services
Division of Sleep Medicine at the Harvard Medical School
Driving School Association
Emerson Hospital
Massachusetts Executive Office of Energy and Environmental Affairs
Foundation for Alcohol Responsibility
Governors Highway Safety Association
Impaired Driving Advisory Board
In Control Family Foundation
Insurance Companies
Jim Berkowitz Drowsy Driving Prevention Project
Junior Operator License Advisory Committee
Liveable Streets Alliance
Local Police Departments
Mass in Motion
Massachusetts Bay Transit Authority
Massachusetts Cannabis Control Commission
Massachusetts Cannabis Dispensary Association
Massachusetts Chiefs of Police Association
Massachusetts Department of Public Health
Massachusetts Department of State Police
Massachusetts Department of Transportation
Massachusetts District Attorneys Association
Massachusetts Drivers Education Association
Massachusetts Executive Level Traffic Records Coordinating Committee
Massachusetts Major City Chiefs Association

Massachusetts Medical Society
Massachusetts Motorcycle Association
Massachusetts Trial Court
MassBike
MassRIDES
McLean Hospital
Merit Rating Board
Mothers Against Drunk Driving
Municipal Police Training Committee
National Safety Council
Office of the Commissioner of Probation
Regional Transit Authorities
Registry of Motor Vehicles
Safe Kids of Boston
Safe Kids of Western MA
Safe Roads Alliance
Safe Routes to Schools
Safety Institute
Sage Naturals
SHSP Executive Leadership Committee
Sleep Health Institute at the Brigham and Women's Hospital
State and Regional Planning and Development Agencies
Traffic Records Coordinating Committee
UMass Gerontology
UMass Memorial Health Care
UMass Boston
UMassSAFE
WalkBoston
Work Zone Safety Committee

FFY 2020 Highway Safety Planning Process

The OGR HSD team began the planning process for developing the FFY 2020 HSP by gathering all relevant data related to performance targets and doing an in-depth analysis of the data to find trends within one-year, five-year, and (if feasible) ten-year periods. The data was analyzed across different fields including county, municipality, month and day of the week, time of day, gender, and age. Furthermore, mapping software was used to provide a visual tool to help analyze trends and hot spots throughout Massachusetts. This information helped identify high-risk locations as well as behavioral trends among roadway users that require attention.

The data sources utilized in this analysis process are listed below:

- Fatality Analysis Reporting System (FARS) – fatalities and fatal crashes
- Massachusetts Crash Data System (CDS) – fatalities and injuries
- Massachusetts Injury Surveillance Program – injuries and hospitalizations
- Massachusetts Citation Data – roadway violations
- Massachusetts Safety Belt Usage Observation Survey – safety belt usage, occupant protection
- FHWA Highway Statistics – Vehicle Miles Traveled (VMT), licensed drivers, and road miles
- U.S. Census Bureau statistics – population, income levels
- FBI Crime Statistics – arrests for driving intoxicated and other vehicle-related crimes

Results of the data were coordinated and shared with the Massachusetts Department of Transportation to ensure performance targets related to fatalities, serious injuries, and fatalities per 100 million VMT are identical to what is in the Massachusetts Highway Safety Improvement Plan (HSIP) and the Strategic Highway Safety Plan (SHSP). Other performance targets were determined through trend analysis and ongoing exchanges with key federal, state, and local partners such as state and local police departments, Massachusetts Department of Public Health, the Governors Highway Safety Association, and the Traffic Records Coordinating Committee.

OGR also relied on input provided by participants during two statewide traffic safety partnership webinars held in May of 2019. A wide range of community partners including state and local police, non-profit organizations focused on road safety, and municipal administrators attended the forums. The participants provided valuable information related to traffic safety issues facing their respective communities and constituencies along with suggestions about potential solutions to address those issues.

Taken together, data analysis and input from community partners, OGR was able to determine where to focus funding for FFY 2020 in order to have the greatest impact in reducing crashes, injuries, fatalities, and associated economic losses.

To help determine problem areas to focus on, the HSD team engaged with many participants during the planning process, including but not limited to:

- Massachusetts Department of Transportation (MassDOT)
- Massachusetts Registry of Motor Vehicles (RMV)
- Massachusetts Department of Public Health
- Massachusetts Department of State Police (MSP)
- Governors Highway Safety Association
- Massachusetts District Attorneys Association (MDAA)
- Massachusetts Executive-Level Traffic Records Coordinating Committee (ETRCC)
- Massachusetts Working-Level Traffic Records Coordinating Committee
- Municipal Police Training Committee (MPTC)
- Merit Rating Board
- University of Massachusetts Traffic Safety Research Program (UMassSafe)
- Local police departments
- Massachusetts Chiefs of Police Association
- SHSP Executive Leadership Committee
- Boston Emergency Medical Services (EMS)
- Massachusetts Alcoholic Beverages Control Commission (ABCC)
- Massachusetts Executive Office of Health and Human Services (EOHHS)
- Safe Roads Alliance
- Colleges and Universities
- In Control Family Foundation

Project Selection Process

OGR will rely on a multi-faceted approach to developing and selecting the projects for FFY 2020. The input used to develop the planned activities came from several sources including:

- Data – Trends in fatalities, fatal crashes, serious injuries, seat belt usage, and traffic citations.
- OGR staff – Provide extensive knowledge on current projects that may be renewed in FFY 2020 as well as critical insight into subrecipient concerns and suggestions.
- Partners – State and local government, community groups and non-profit organizations with a public safety mission.

- Subrecipients – Monthly activity reports and final reports provided great information on the impacts of current programs and what could be changed or improved to make the programs more effective. Program managers within the HSD establish spreadsheets for every grant under their purview, covering all aspects including funding, expenditures, and activity (i.e. number of stops, hours of patrol, types of violations issued). Since many projects are the same year-to-year, staff are able to compare projects across several years to see trends or where changes need to be made to improve the impact of the funds distributed.
- Open meetings – The HSD team conducted two webinars in May 2019 to solicit feedback from partners about a wide range of traffic safety issues.

Combining all the sources together, OGR seeks to institute programs that will have the greatest positive impact in terms of reducing crashes, fatalities, injuries and associated economic losses. Grant subrecipients will be selected for funding based on data-backed problem identification and how their proposed activity will address the problem.

When making NHTSA funding available to the public, an Availability of Grant Funding (AGF) opportunity (our competitive application process) is posted online through the state Mass.Gov online portal and emails are sent out to prior and potential partners across the state, including, but not limited to, MSP, local police, municipalities, state agencies, hospitals, and non-profit organizations to ensure eligible recipients are aware of our funding opportunities. The emails provide a hyperlink (URL) to the location in the Mass.Gov portal where the AGFs and associated grant documents are posted for a minimum of 4-6 weeks. OGR will continue to utilize a scoring process that results in all applications being rated along with several elements and then ranked from highest to lowest to determine grant awardees. The scoring process will involve convening a Review Team (RT) that will read and rate all submitted applications. Scoring will be based on application completeness, problem identification, description of planned activities, and the potential for positive impacts on a community's traffic safety.

Due to the requirements of disseminating the NHTSA funds and specific eligible recipients, many of our NHTSA grant subrecipients who receive these funds or are expected to receive these funds are not done so via a competitive review process. These subrecipients are sole source funded and a notice of intent is posted on the Mass.Gov portal for up to 30 days to inform the public of such award to be made and for the public to comment on if they wish to do so. Regardless if an award is competitive or sole-sourced, all subrecipients will be required to complete an Application Template which will provide a full description of the program to be funded, need, goals/objectives/timeline and detailed budget breakdown of all costs. All expected awards are vetted by the Executive Director, EOPSS leadership and the Governor's Office for final approval.

Coordination with SHSP

The SHSP has statewide goals, objectives and emphasis areas which were developed in consultation with federal, state, local, and private sector safety stakeholders using data-driven, multi-disciplinary approaches involving engineering, education, enforcement, and emergency response.

As a key contributor to the SHSP planning process, OGR has worked with MassDOT (the lead agency for the SHSP) and other key stakeholders such as EOHHS, Department of Public Health, regional transit authorities, insurance companies, WalkBoston, and hospitals to develop a tiered classification of emphasis areas. The emphasis areas are broken into three levels: Strategic, Proactive, and Emerging.

Strategic areas: Impaired Driving, Intersection Crash Prevention, Lane Departures, Occupant Protection, Speeding/Aggressive Driving, Young Drivers, Older Drivers, Pedestrians, and Motorcycle Riders.

Proactive areas: Bicycles, Truck, and Bus-Involved Crashes, At-Grade Crossing, and Traffic Incident Management Safety (formerly work zone safety). These areas represent less than 10% of annual fatalities or severe injuries but require attention to minimize potential increases.

Emerging areas: Data Systems, Drowsy Driving, and Driver Inattention (or Distracted Driving). These areas focus on improving the data system used to analyze traffic safety patterns and for safety topics where data is currently inconclusive.

In the HSP, targets many of the same emphasis areas as the SHSP including impaired driving, occupant protection, speeding/aggressive driving, young and older drivers, pedestrians, motorcycles, bicycles, distracted and drowsy driving, and data systems (traffic record systems). Intersection Crash Prevention, lane departures, and at-grade crossings are not emphasis areas that are within the purview of the OGR mission. Through grant funding and media messaging, OGR seeks to change driver, passenger, and non-occupant behaviors that will result in reduced fatalities on the roadways of Massachusetts. At the same time, the SHSP looks to limit motor vehicle-related fatalities through infrastructure improvements such as better roadway design, improved crosswalks, and the upgraded installation of traffic lights. The combination of improving the physical roadway and roadway user behaviors between OGR and MassDOT, respectively, provides the best strategy for reducing fatalities.

OGR also works in collaboration with MassDOT to establish yearly targets for three key core performance measures – fatalities, fatalities/VMT, and serious injuries. Per federal law (FAST Act), the HSP and SHSP (or HSIP) must have identical targets for these three performance measures. This ensures both agencies are united in the same objectives and will help drive all programs run by both agencies towards the common goals of decreasing fatalities, fatalities/VMT, and serious injuries in the long-term.

The performance targets identified in the following section were established as part of the problem identification process described above. Performance targets were established by reviewing data trends provided by sources such as FARS, MassDOT’s Crash Portal, and NHTSA reports.

For FFY 2020, based on available data, OGR and MassDOT have adopted the following goals for calendar base year 2016-2020 for fatalities, serious injuries, and fatalities/VMT.

- Five-year average for **fatalities** will drop 3% to 347 by December 31, 2020
- Five-year average for **serious injuries** will decrease 4% to 2,689 by December 31, 2020
- Five-year average for **fatalities/VMT** will drop 3.5% to 0.56 by December 31, 2020

Evidence-Based Traffic Safety Enforcement Plan (TSEP) in Massachusetts

The identification of current traffic safety issues for the FFY 2020 HSP was made using data analysis of fatalities and fatal crashes over a five-year period (2013–2017), from numerous elements including, but not limited to, counties, cities, time-of-day, month, day-of-week, road type, gender, and age. Data from available monthly and year-end reports from FFY 2019 grant-funded programs provided further insight into traffic safety trends. Lastly, input from traffic safety stakeholders added a third layer of analysis to the determination of traffic safety issues in Massachusetts.

The Massachusetts population (6,895,917) ranks 15th among the 50 states of the union. There are 36,723 miles of roadway across the 7,840 square miles of the Commonwealth. Local roads account for 68% of roadways with 24,818 miles. Massachusetts drivers tallied 60,753 million VMT with interstate travel accounting for 28% of it, followed by major arterials (20%), minor arterials (20%) and local roads (14%). Massachusetts is among the top 25 states in total VMT despite being one of the smallest states by land area in the country.

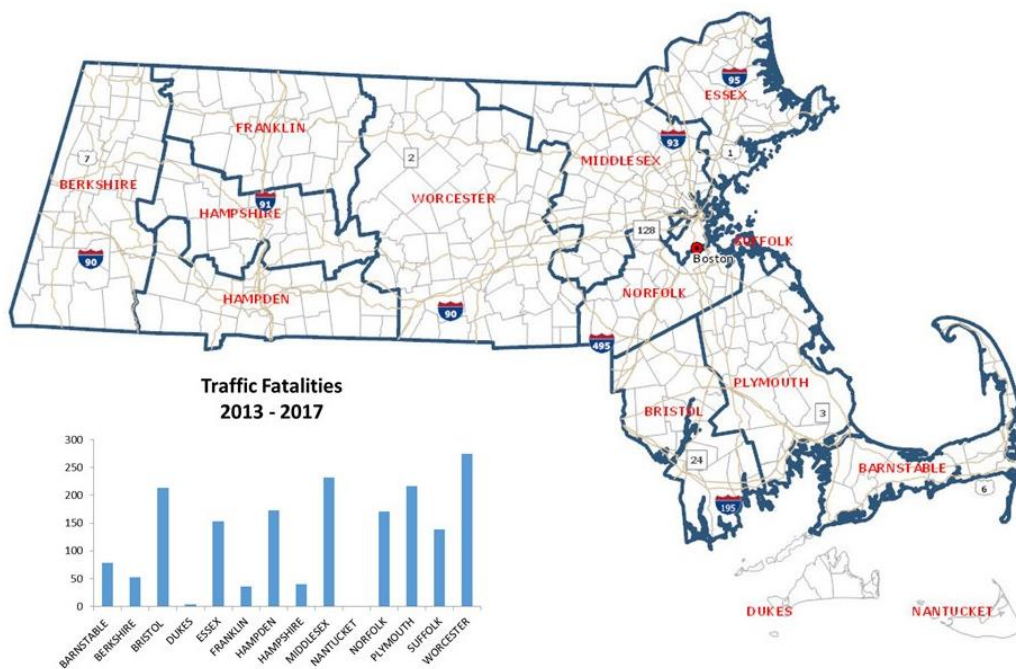
From 2013 to 2017, Massachusetts reported 1,783 motor vehicle-related fatalities and 14,717 incapacitating injuries along its roadways. This is a 2% drop from the 1,819 deaths reported from 2012 to 2016. In terms of fatalities per VMT, Massachusetts has consistently had either the lowest or one of the lowest fatality rates in the country. In 2017, Massachusetts reported 347 fatalities for a fatality/VMT rate of 0.57. The five-year average of fatality/VMT from 2013-2017 was 0.59.

There are fourteen counties across Massachusetts: Barnstable, Berkshire, Bristol, Dukes, Essex, Franklin, Hampden, Hampshire, Middlesex, Nantucket, Norfolk, Plymouth, Suffolk, and Worcester. Over 70% of the population lives in the eastern part of the state in Essex, Middlesex, Suffolk, Norfolk, Bristol, and Plymouth counties. The eastern region of Massachusetts also encompasses most of the major roadways such as I-495, I-95, I-93, I-195, Rt. 128, Rt. 24, Rt. 9, Rt. 3, and Rt. 2. Boston, the capital, is located in Suffolk County and is the largest city in the Commonwealth.

While the eastern part of the state has more roadways and people than central or western Massachusetts, it also has an extensive public transportation system that helps alleviate the traffic congestion that comes with daily commutes into the Metro Boston area. The Massachusetts Bay Transportation Authority (MBTA) provides subway, bus, and commuter rail options for commuters as well as boat transportation from several coastal communities in locations north and south of Boston. Having public transportation options available has resulted in Suffolk County accounting for only 8% of all traffic fatalities from 2013-2017 despite the heavy volume of traffic into and out of Metro Boston every day. Worcester County, which has end terminals for the commuter rail as well as a robust local public bus transportation system, accounted for 15% of all traffic fatalities during the same time period.

Despite the low fatalities for Suffolk County, the surrounding counties of Essex, Middlesex, Norfolk, Bristol, and Plymouth accounted for 55% of all traffic fatalities from 2013-2017.

Massachusetts Counties and Major Roads



At the city/town level, traffic fatalities were highest in Boston with 120 motor-vehicle related deaths during the five-year period from 2013 to 2017. Springfield, Brockton, Worcester, and Middleborough rounded out the top five, respectively.

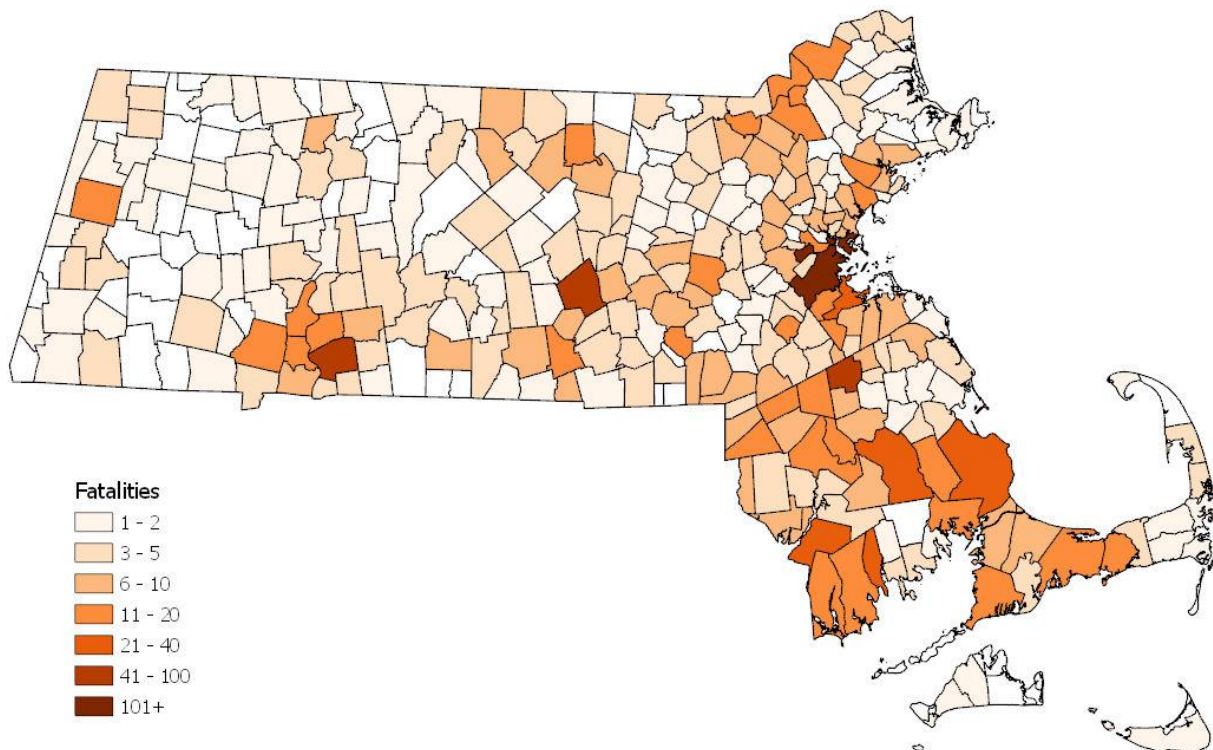
Total Fatalities (2013 - 2017)	
BOSTON	120
SPRINGFIELD	56
BROCKTON	48
WORCESTER	45
MIDDLEBORO	32
NEW BEDFORD	28
QUINCY	24
PLYMOUTH	23
FALL RIVER	22
HOLYOKE	19
DARTMOUTH	18
FITCHBURG	17
LOWELL	17
WAREHAM	17
WESTFIELD	17
WESTPORT	17
CHICOPEE	16
ANDOVER	15
MANSFIELD	15
METHUEN	15
RANDOLPH	15
RAYNHAM	15
OXFORD	14
TAUNTON	14
WEST SPRINGFIELD	14

Eleven of the top 25 towns hail from Southeastern Massachusetts (Bristol County – 7; Plymouth County – 4). Brockton, Dartmouth, Fall River, Mansfield, Middleboro, New Bedford, Plymouth, Raynham, Taunton, Wareham, and Westport accounted for 58% of the combined 430 fatalities reported in Bristol and Plymouth County from 2013-2017. The map provided below reveals the high incidence of motor vehicle-related fatalities across these two counties.

Surprisingly, Middlesex County only had one town (Lowell) in the top 25 given that the county accounted for 13% of the motor vehicle-related fatalities from 2013-2017. The lack of fatalities concentrated among a few towns means Middlesex likely has had traffic fatalities occurring with regularity across all communities within its boundary.

As in prior HSP, Massachusetts will continue supporting and funding key programs to help make the roadways safer in these high fatality communities and counties. To get a better idea of where and when traffic fatalities occur in the Commonwealth, data regarding the time-of-day, day-of-week, month, roadway type, person type, and age will be examined. This will help provide a fuller picture of crash fatality trends in Massachusetts, which will further assist OGR in focusing time and funding for key programs describe within this HSP.

2013 - 2017 Motor Vehicle-Related Fatalities by Town



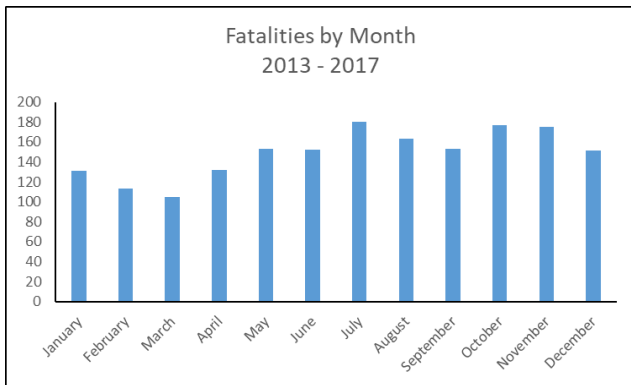


Figure 1: Fatalities by Month, 2013-2017 (Source: FARS)

From 2013 to 2017, traffic fatalities happened more frequently during the months of July, October, and November. These three months make up 30% of the fatalities. The period from July to December accounted for 56% of fatalities compared to 44% from January to June.

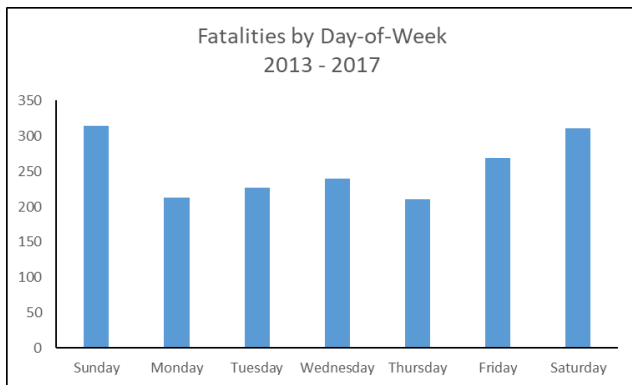


Figure 2: Fatalities by Day-of-Week, 2013-2017 (Source: FARS)

From 2013 to 2017, the weekend accounted for the top two days for fatalities with 35% of all fatalities occurring on either Saturday or Sunday. If Friday is included as part of the weekend, the three-day period accounts for half of the fatalities that take place during the seven days of the week.

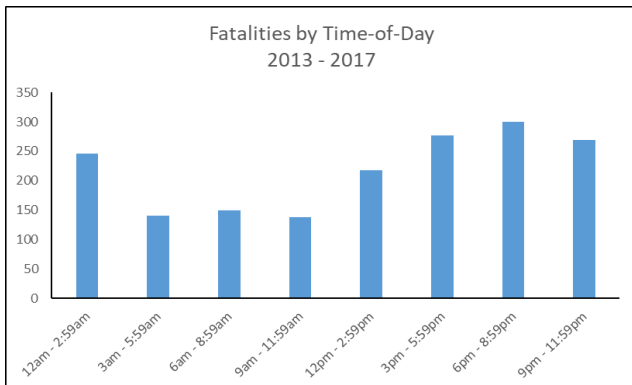


Figure 3: Fatalities by Time-of-Day, 2013-2017 (Source: FARS)

Using a three-hour range, the time from 6 pm to 8:59 pm recorded the most fatalities from 2013 to 2017. The three hours prior and after this time frame was the second and third highest periods for fatalities, respectively. In all, the time from 3 pm to 11:59 pm accounted for 47% of all traffic fatalities. Alcohol, drugs, speeding, and failure to use safety restraints, which will be analyzed further in this document, are all contributing factors to the higher totals reported during this time.

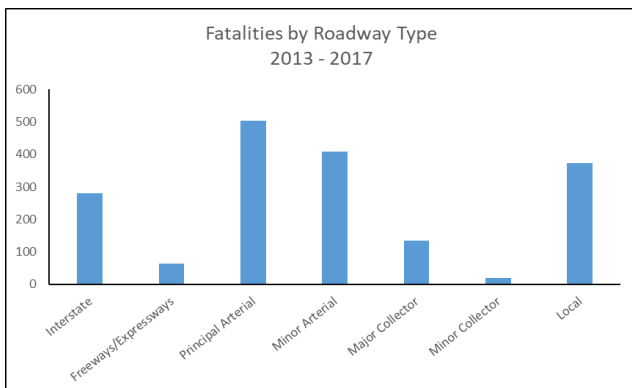


Figure 4: Fatalities by Roadway Type, 2013-2017 (Source: FARS)

From 2013 to 2017, traffic fatalities occurred most often on principal and minor arterial roads. These two roadway types accounted for over half of all traffic fatalities during the five-year period. Local roads were the site of 21% of all fatalities.

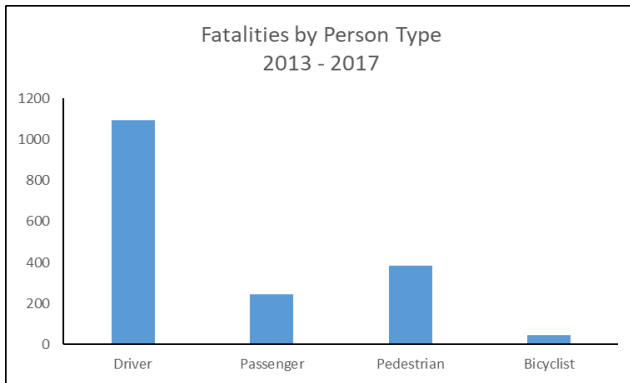


Figure 5: Fatalities by Person Type, 2013-2017 (Source: FARS)

From 2013 to 2017, drivers made up over 60% of all fatalities in motor vehicle-related crashes. Pedestrians accounted for 22%, with passengers and bicyclists following behind with 14% and 3%, respectively.

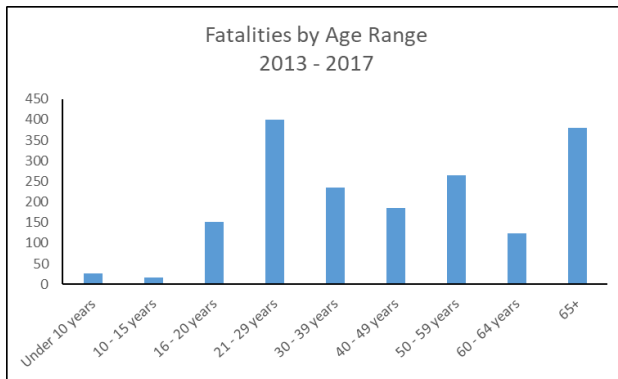


Figure 6: Fatalities by Age Range, 2013-2017

Lastly, fatalities by age range. Young teens and children (age 15 or younger) accounted for 2% of fatalities, while older teens and young adults (age 16 to 20) accounted for 8% of traffic deaths. The low number of fatalities can be attributed to the positive impact of Massachusetts law requiring passengers age 12 or younger to be buckled up as well as meaningful Junior Operator Laws (JOL) that place restrictions on new drivers under the age of 18.

Those age 21-29 accounted for 22% of all fatalities and, as will be examined in the Occupant Protection program area, are the leading age group for unrestrained fatalities from 2013-2017. Speeding is also highly prevalent among drivers in this age group, which can increase the risk of serious or fatal injury in a crash – especially when not wearing a seat belt.

Based on the data provided thus far, traffic fatalities in Massachusetts happen more frequently in eastern Massachusetts compared to the central and western part of the state. Bristol and Plymouth County, with 11 of the top 25 communities for fatalities from 2013-2017, are of particular concern and focus for OGR.

Law enforcement will be advised of the importance of conducting overtime enforcement patrols during periods of high crash occurrences such as July thru November, Friday through Sunday, and the hours from 3 pm to midnight. Particular focus on circumstances where young adults (age 21 – 29) tend to crash will likely have a positive effect on lowering the number of fatalities for this age group.

While the data presented so far provides a basic overview of the state of motor vehicle-related fatalities in Massachusetts, the FFY 2020 HSP will also look in more detail at fatalities involving impaired driving, lack of safety restraints or helmets, speeding, distracted driving, motorcyclists, and non-occupants (pedestrians and bicyclists) within the respective program area.

Performance Review of 2019 HSP Targets

Core Performance Measures

C-1 Traffic Fatalities

In the FFY 2019 HSP, the performance target for fatalities was to decrease motor vehicle fatalities 3.61% from the five-year average of 367 in 2016 to a five-year average of 353 by December 31, 2019.

- One-year change (2016 to 2017): 10.3% decrease in fatalities from 387 to 347
- Five-year average change (2012-2016 to 2013-2017): 2.0% decrease from 364 to 357

This performance target is currently in progress. OGR is cautiously confident the 387 fatalities reported in 2016 was an outlier and, going forward yearly fatalities will be much lower.

C-2 Serious Injuries

In the FFY 2019 HSP, the performance target for serious injuries was to decrease serious injuries 10.6% from the five-year average of 3,132 in 2016 to a five-year average of 2,801 by December 31, 2019.

- One-year change (2016 to 2017): 13.7% decrease from 2,983 to 2,575
- Five-year average change (2012-2016 to 2013-2017): -6.4% drop from 3,146 to 2,943

This performance target is currently in progress. With a five-year average decline of 6.4% in the past year and a 19.5% decline in serious injuries since 2013, Massachusetts is cautiously optimistic about achieving the five-year average goal of 2,801 by December 31, 2019.

C-3 Fatality/VMT

In the FFY 2019 HSP, the performance target for fatalities/VMT was to decrease fatality/VMT rate 8.72% from the five-year average of 0.64 in 2016 to a five-year average of 0.58 by December 31, 2019.

- One-year change (2016 to 2017): 7.9% decrease from 0.63 to 0.58
- Five-year average (2012-2016 to 2013-2017): -3.2% decline from 0.63 to 0.61

This performance target is in progress. The one-year decrease was due to the drop in motor vehicle fatalities from 387 to 347 from 2016 to 2017. OGR believes the fatality/VMT rate will remain low as the number of fatalities remain steady or declines while VMT continues to rise. Since 2013, VMT in Massachusetts has gone up 2% from 59,588 million to 60,753 million.

C-4 Unrestrained Motor Vehicle Occupant Fatalities

In the FFY 2019 HSP, the performance target was to decrease unrestrained passenger vehicle occupant fatalities 5% from the five-year average of 102 in 2016 to a five-year average of 97 by December 31, 2019.

- One-year change (2016 to 2017): 12.9% increase from 116 to 131
- Five-year average (2012-2016 to 2013-2017): 5.4% rise from 104 to 110

This performance target is in progress. Despite the uptick in unrestrained passenger fatalities from 2016 to 2017, OGR expects to see unrestrained fatalities drop in 2018 as the Statewide Seat Belt Usage rate rose from 74% in 2017 to 82% in

2018. An eight percentage point jump indicates more people than ever are utilizing their seat belts when riding in a motor vehicle and ultimately means better protection from fatal injury in the event of a crash.

C-5 Alcohol-Impaired Driving Fatalities (BAC = .08 or higher)

In the FFY 2019 HSP, the performance target was to decrease alcohol-impaired driving fatalities 5% from the five-year average of 126 in 2016 to a five-year average of 119 by December 31, 2019.

- One-year change (2016 to 2017): 18.9% decrease from 148 to 120
- Five-year average (2012-2016 to 2013-2017): 1.4% drop from 130 to 128

Progress is being made on this target. The total number of alcohol-impaired fatalities for the five-year period 2013-2017 was 641, down from 650 for 2012-2016. The rate of alcohol-impaired fatalities per 100 million VMT dropped from 0.24 in 2016 to 0.20 in 2017. OGR is cautiously optimistic the decline of both alcohol-impaired fatalities and alcohol-impaired fatalities/VMT indicate a positive trend towards lower alcohol-impaired fatalities in the near future.

C-6 Speed-Related Fatalities

In the FFY 2019 HSP, the performance target was to decrease speed-related fatalities 5% from the five-year average of 97 in 2016 to a five-year average of 94 by December 31, 2019.

- One-year change (2016 to 2017): 21.6% decrease from 125 to 98
- Five-year average (2012-2016 to 2013-2017): 3.2% drop from 101 to 98

This performance target is in progress as the five-year average for 2017 moves closer towards the target of 94 by the conclusion of 2019. OGR sees the number of speed-related fatalities in 2016 as an outlier as the previous three years (2013-2015) averaged 89 fatalities per year and expects the FFY 2019 target to be met in 2019.

C-7 Motorcyclist Fatalities

In the FFY 2019 HSP, the performance target was to decrease motorcyclist fatalities 5% from the five-year average of 49 in 2016 to a five-year average of 46 by December 31, 2019.

- One-year change (2016 to 2017): 15.9% increase from 44 to 51
- Five-year average (2012-2016 to 2013-2017): 2% decline from 49 to 48

This performance target is currently in progress. Despite the increase in year-to-year motorcycle fatalities, the five-year average dropped. OGR expects continued funding and focuses on improving motorcycle driver training and education in collaboration with the RMV during FFY 2019 will lead to declining fatalities among motorcyclists.

C-8 Unhelmeted Motorcyclist Fatalities

In the FFY 2019 HSP, the performance target was to decrease unhelmeted motorcycle fatalities 25% from the five-year average of 4 in 2016 to a five-year average of 3 by December 31, 2019.

- One-year change (2016 to 2017): 66.7% drop from 3 to 1
- Five-year average (2012-2016 to 2013-2017): No change, remains at 4

Although the five-year average for both 2016 and 2017 have attained the goal of four set in the FFY 2018 HSP, this performance target remains in progress as the numbers for 2018 and 2019 are yet to be determined.

C-9 Number of Drivers age 20 or younger Involved in a Fatal Crash

In the FFY 2019 HSP, the performance target was to decrease the number of young drivers (age 20 or under) involved in fatal crashes 5% from the five-year average of 38 in 2016 to a five-year average of 36 by December 31, 2019.

- One-year change (2016-2017): 25% decrease from 48 to 36
- Five-year average (2012-2016 to 2013-2017): 4.7% decline from 38 to 36

Although his performance target is still in progress as the numbers from 2018 and 2019 remain to be seen, the five-year average for 2017 has met the FFY 2019 target goal of 36 to be achieved by December 31, 2019.

C-10 Pedestrian Fatalities

In the FFY 2019 HSP, the performance target was to decrease pedestrian fatalities 5% from the five-year average of 79 in 2016 to a five-year average of 75 by December 31, 2019.

- One-year change (2016 to 2017): 7.7% decrease from 78 to 72
- Five-year average (2012-2016 to 2013-2017): 2.6% drop from 78 to 76

This performance target is in progress. The decline in both the one-year and five-year values for 2017 point towards a high likelihood of meeting the target goal of 75 by December 31, 2019. OGR is confident the expansion of its pedestrian safety-related grant program in FFY 2018 and 2019 will have a positive impact on the numbers for those two years.

C-11 Bicyclist Fatalities

In the FFY 2019 HSP, the performance target was to decrease bicyclist fatalities 10% from the five-year average of 10 in 2016 to a five-year average of 9 by December 31, 2019.

- One-year change (2016 to 2017): 20% increase from 10 to 12
- Five-year average (2012-2016 to 2013-2017): No change, remains at 10

This performance target is currently in progress. The expansion of the pedestrian safety-related grant program mentioned above involves bicyclist safety as well. Subrecipients have been allowed to purchase bicycle helmets with funding received for the Pedestrian and Bicyclist Enforcement and Equipment Grant. This recent change to the grant will further help communities improve bicyclist safety, especially among children age 12 or younger.

B-1 Observed Seat Belt Usage

In the FFY 2019 HSP, the performance target was to increase observed seat belt use rate 3% from the five-year average of 76% in 2016 to a five-year average of 78% by December 31, 2019.

- One-year change (2016 to 2017): 10.8% increase from 74% to 82%
- Five-year average (2012-2016 to 2013-2017): 1.9% increase in belt usage from 76% to 77%

This performance target is currently in progress. The increase in the five-year average, as well as the 7% rise in belt usage since 2014, provide evidence of a positive trend towards attaining the goal of 78% by December 31, 2019.

Non-Core Performance Measures

Below are targets that Massachusetts HSD listed in the 2019 HSP that were not considered ‘core’ targets by NHTSA but helped provide further data support on traffic safety throughout the state.

NC-1 Distraction-Affected Fatal Crashes

In the FFY 2019 HSP, the performance target was to decrease the five-year average of distraction-affected fatal crashes 10% from 30 in 2016 to 27 by December 31, 2019.

- One-year change (2016 to 2017): 36.4% decline from 33 to 21
- Five-year average (2012-2016 to 2013-2017): 7.1% decrease from 31 to 29

This performance target is in progress. The drop in both the one-year and five-year average indicate positive movement towards the goal of 27 by December 31, 2019. OGR is confident the continued funding of statewide distracted driving messaging such as the recent “Don’t be that guy” advertising campaign will help increase driver awareness.

Performance Review of Traffic Records-Related Targets

Traffic Records projects are aimed at improving the accuracy, completeness, and timeliness of the traffic records data collection systems in Massachusetts. Below is a review of progress made on performance targets listed in the 2018 HSP.

TR-1 Number of Linked Massachusetts Emergency Medical System (EMS)/crash report

For FFY 2019, the target was to improve the integration of traffic records systems by increasing the number of linked Massachusetts EMS/crash reports from 0% to 75% from January 1, 2018, to December 31, 2018.

The goal was not achieved as the final linkage rate was 58% as of December 31, 2018.

TR-2 Improve Accuracy and Completeness of RMV’s Crash Data System

For FFY 2019, the target was to decrease the number of crash reports rejected for not meeting the minimum criteria to be accepted into the system from 1,487 between April 1, 2017, and March 31, 2018, to 1,425 or less between April 1, 2018, and March 31, 2019.

This goal was not achieved as the number of crash reports rejected for not meeting the minimum criteria to be accepted into the system only decreased from 1,487 to 1,466 by March 31, 2019.

TR-3 Number of Ambulance Services Submitting NEMSIS Version 3.0

For FFY 2019, the target was to improve the completeness of MATRIS by increasing the number of ambulance services submitting NEMSIS Version 3 reports to the system from 0 between April 1, 2017, and March 31, 2018, to 3 or more between April 1, 2018, and March 31, 2019.

This goal was achieved with the number of ambulance services submitting NEMSIS Version 3 reports to MATRIS increased from zero to eight by March 31, 2019.

TR-4 Number of Intersections with Fundamental Data Elements (FDEs)

For FFY 2019, the target was to improve the completeness of the Massachusetts statewide road inventory database by increasing the number of intersections with Fundamental Data Elements (FDEs) from 0 as of June 30, 2017, to 5,400 as of December 31, 2018.

This goal was not achieved as the final number of intersections with FDEs was 1,407 by September 30, 2019.

TR-5 Development of a new MassTRAC

For FFY 2019, the target was to develop a tentative business plan for a new MassTRAC by September 30, 2018.

This goal was not achieved as it was deemed prudent to await further research on the upgrading of MassDOT's Crash Data Portal before proceeding with a business plan.

Required grant-funded enforcement activity measurements as of FFY 2018:

- Number of seat belt citations issued during grant-funded activities: **5,599**
→ *Down from 9,275 in FFY17 as a result of delayed funding which limited enforcement activity*
- Number of impaired driving arrests made during grant-funded enforcement activities: **304**
→ *Down from 369 in FFY17 as a result of delayed funding which limited enforcement activity*
- Number of speeding citations issued during grant-funded enforcement activities: **7,829**
→ *Down from 15,003 in FFY17 as a result of delayed funding which limited enforcement activity*

Reporting grant-funded enforcement activity for FFY 2018 (last completed FFY of activity) is requested by NHTSA as a means to compare year-to-year enforcement activity and effectiveness. OGR does not have to provide a projected target for these activities during each FFY.

Core Performance Measure Targets for FFY 2020

Disclaimer: The first three performance measures and projected targets listed in this section – Traffic Fatalities, Serious Injuries, and Fatalities/VMT – are required by NHTSA and FHWA to be identical to what MassDOT projects in its annual State Highway Safety Plan report. Please be aware that FHWA has been pushing MassDOT to use the five-year average 2014-2018 to develop the 2020 targets. At this time, 2017 fatality data for Massachusetts is still not finalized and 2018 is preliminary. MassDOT and OGR's targets for these three performance measures must match or FHWA will delay funding to MassDOT until the targets are in line. Because of this requirement, the actual data results shown for 2013-2017 may not support, at this time, the projections for 2020.

C-1 Traffic Fatalities

For the FFY 2020 HSP, OGR is projecting that the five-year average for traffic fatalities will drop 3% from 358 in 2018 to 347 by December 31, 2020.

Historical data suggests that the 387 deaths reported in 2016 will be an outlier and that data from 2018 and 2019 should show a return to the norm. As the chart below shows, the 387 reported fatalities in 2016 were preceded by three years with lower totals. Plus, the fatalities for 2017 were over 10% lower than in 2016.

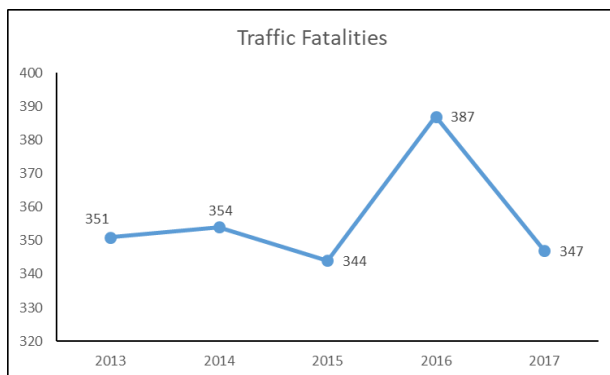


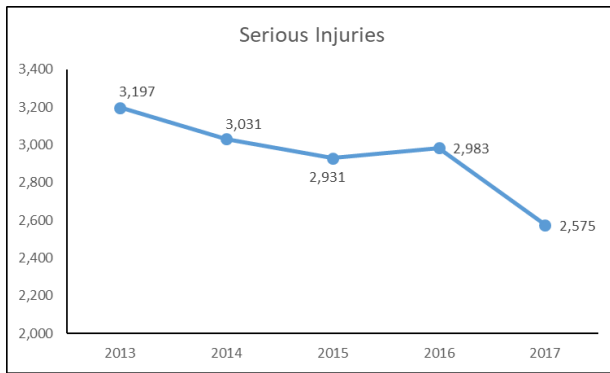
Figure 6: Traffic Fatalities, 2013-2017

OGR is also confident that the slate of planned activities for FFY 2020 will help to further reduce traffic fatalities as the integrated approach of enforcement, education and media outreach positively impacts occupant and non-occupant behaviors on the roadways of Massachusetts.

C-2 Serious Injuries

For FFY 2020, OGR projects that the five-year average for serious injuries will decrease 4% from 2,810 in 2018 to 2,689 by December 31, 2020.

Serious injuries have declined nearly 20% since 2013 and OGR is confident it will continue falling in light of the jump in seat belt usage from 77% in 2017 to 82% in 2018. Safety improvements to vehicles such as collision alerts and automatic braking will further increase the safety of users of Massachusetts' roadways.

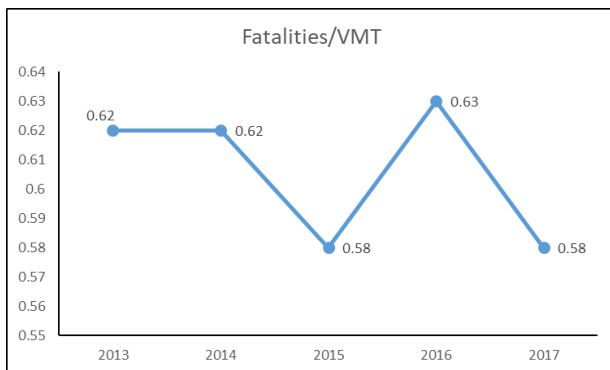
**Figure 7: Serious Injuries, 2013-2017**

OGR expects its FFY 2020 planned activities to have a positive impact on serious injuries with enforcement, education and media campaigns aimed at increasing safety awareness, especially wearing seat belts, distractions, impairment and maintaining reasonable speeds. Each person that wears a seat belt, drives attentively, soberly and under control increases his/her chances of surviving a crash with minimal or no injuries.

C-3 Fatalities/VMT

For FFY 2020, OGR projects the five-year average for fatalities/VMT will drop 3.5% from 0.57 in 2018 to 0.56 by December 31, 2020.

In 2017, the number of fatalities dropped over 10% from 2016 and the five-year average for fatalities declined 2%. Concurrently, VMT is expected to continue rising by nearly 1% yearly. This combination of increasing VMT and declining fatalities over the next few years will result in lower fatality/VMT rates.

**Figure 8: Fatalities/VMT, 2013-2017**

Preliminary fatality data for 2018 from RMV indicates the number of motor vehicle-related fatalities is 360. With the VMT expected to increase at least 1% in 2018, the five-year fatalities/VMT rate is projected to be 0.59. While preliminary numbers will likely lead to an unchanged five-year average rate in 2018, OGR is confident the successful implementation of its grant programs during FFY 2019 will lead to lower fatalities in 2019 that will help meet the goal of 0.56 by December 31, 2020.

C-4 Unrestrained MV Occupant Fatalities

For FFY 2020, the performance target is to decrease the five-year average for unrestrained passenger vehicle fatalities 2% from 110 in 2017 to 108 by December 31, 2020. After hitting a ten-year low in 2015, unrestrained fatalities have risen substantially in the following years. OGR is cautiously optimistic the jump in seat belt usage rate from 74% to 82% in 2018 is reflective of a more educated and knowledgeable motor vehicle occupant population, which would lead to lower unrestrained fatalities in 2018 and 2019.

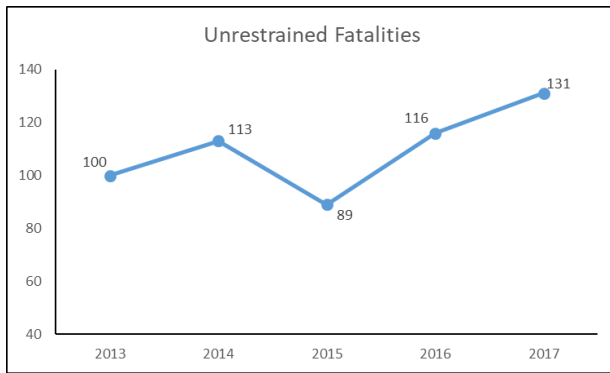


Figure 9: Unrestrained Fatalities, 2013-2017

Given the recent increase in unrestrained fatalities, a 2% decline in the five-year average by December 31, 2020, is prudent. As done in FFY 2019, OGR will utilize detailed unrestrained data to focus messaging for seat belt usage and awareness campaign in key ‘hot spots’ across Massachusetts. These ‘hot spots’ include the counties of Worcester, Bristol, and Plymouth – which account for 43% of all unrestrained fatalities from 2013 to 2017. In terms of the age range, the 21-29 segment accounted for 27% of all unrestrained fatalities and OGR will tailor messaging to appeal to drivers and passengers in that age bracket.

C-5 Alcohol-Impaired Driving Fatalities (BAC = 0.08 or higher)

For FFY 2020, the performance target is to decrease alcohol-impaired driving fatalities 3% from the five-year average of 128 in 2017 to 124 by December 31, 2020. The fluctuation in alcohol-impaired driving fatalities makes it difficult to predict what 2018, 2019 and 2020 may bring.

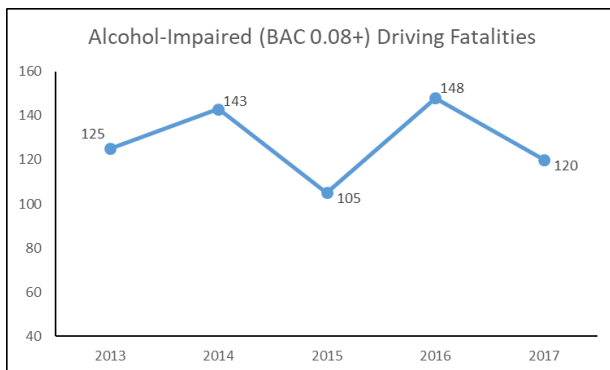


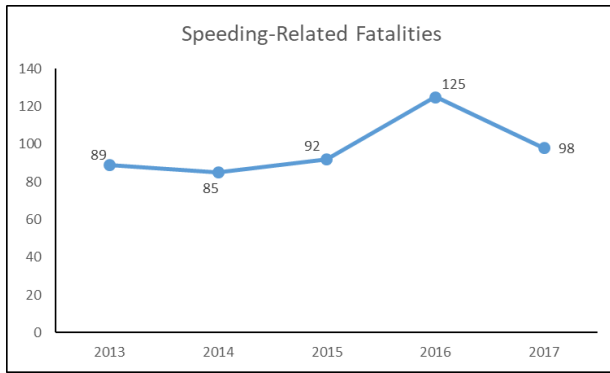
Figure 10: Alcohol-Impaired Fatalities, 2013-2017

OGR decided to decrease the target to 3% from 5% used in FFY 2019 as a hedge against the unpredictable nature of alcohol-impaired fatalities on a year-to-year basis. For FFY 2020, there will be increased coordination between OGR and ABCC to better target areas of high impaired driving rates and expose establishments known for providing last drinks to drivers involved in fatal crashes. Additionally, the MSP Sobriety Checkpoint & Saturation Patrol Planned Activity will be structured to focus resources on clusters of communities that have high incidences of impaired driving fatalities

on local Roads. There will be extra emphasis on engaging local police departments to participate in the activities.

C-6 Speeding-Related Fatalities

For FFY 2020, the performance target is to decrease speed-related fatalities 5% from the five-year average of 98 in 2017 to 93 by December 31, 2020. After a 22% drop in fatalities from 2016 to 2017, OGR is confident the 125 fatalities reported in 2016 is an outlier and speed-related deaths will return to mean of the previous three years (89, 2013-2014), making the target of 93 by 2020 feasible.

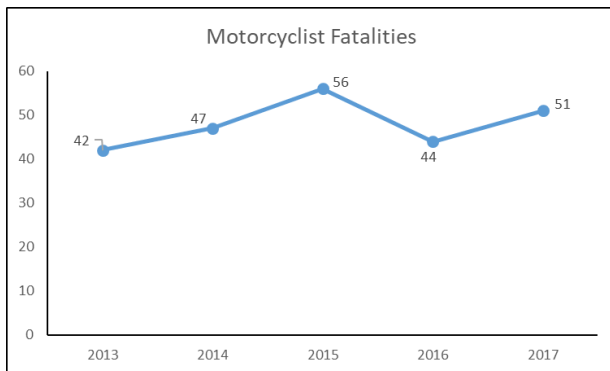
**Figure 11: Speed-Related Fatalities, 2013-2017**

OGR will be implementing two, speed-specific programs in FFY 2020. One will be implemented by MSP and the other will be incorporated as a new enforcement component of the Local Police Traffic Enforcement Grant Program. Also, subrecipients of the STEP and Pedestrian and Bicycle grants will continue to provide data in reports regarding the issuance of speed-related violations. Law enforcement, especially those in regions with high speed-related fatalities such as Worcester and Hampden counties, will be provided detailed data to better align their overtime enforcement patrols with recent trends. One recommendation for FFY 2020 will be to have

more patrols during the months of July, October, and November – which account for over 33% of all speed-related fatalities from 2013 to 2017.

C-7 Motorcyclist Fatalities

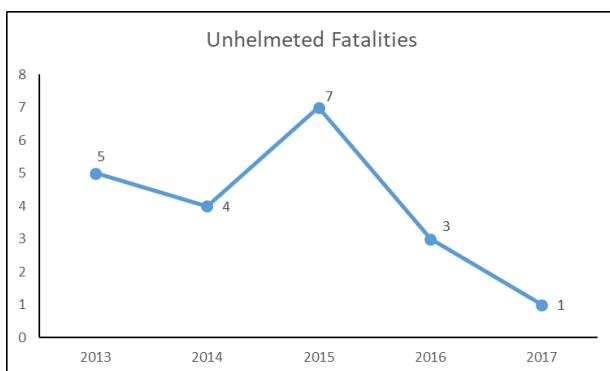
For FFY 2020, the performance target is to decrease motorcyclist fatalities 5% from the five-year average of 48 in 2017 to 46 by December 31, 2020. Despite the increase in fatalities from 2016 to 2017, the five-year average dropped 2% from 49 to 48. The number of motorcycle fatalities per 100 million VMT has declined from 0.09 in 2013 to 0.08 in 2017, an 11% drop.

**Figure 12: Motorcyclist Fatalities, 2013-2017**

In FFY 2020, OGR will focus motorcycle safety media campaigns to regions of high motorcycle fatalities such as Plymouth and Worcester counties, which together account for over 30% of all fatalities from 2013 to 2017. As for motorcycle awareness education, counties with high motorcycle fatalities such as Norfolk and Bristol will be a target to make drivers more aware of motorcycles on the roadways. Both media messaging plans should help decrease the number of motorcyclist fatalities to achieve the target goal of 46 by 2020.

C-8 Unhelmeted Motorcyclist Fatalities

For FFY 2020, the performance target is to decrease unhelmeted motorcycle fatalities 25% from the five-year average of 4 in 2017 to 3 by December 31, 2020. Since 2015, unhelmeted fatalities have fallen from seven to one – an 85% drop.

**Figure 13: Unhelmeted Fatalities, 2013-2017**

Despite the decline in unhelmeted motorcycle fatalities, OGR will continue working on effective messaging on the dangers of not wearing helmets, especially among the 21-24 age range. These riders accounted for 20% of all motorcyclist fatalities from 2013-2017.

C-9 Young Drivers (Age 20 or younger) Involved in a Fatal Crash

For FFY 2020, the performance target is to decrease the number of young drivers (age 20 or under) involved in fatal crashes 5% from the five-year average of 36 in 2017 to 35 by December 31, 2020.

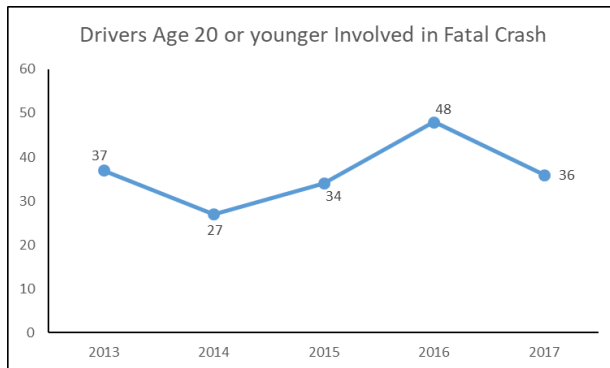


Figure 14: Young Drivers in Fatal Crashes, 2013-2017

After hitting an all-time low of 27 in 2014, the number of drivers under 21 years of age in a fatal crash has increased by 33% to 36 in 2017. While this is very concerning, the five-year average for 2013-2017 dropped nearly 5% to 36. Furthermore, young drivers accounted for only 8% of all drivers involved in a fatal crash from 2013-2017 meaning OGR's messaging as well as Junior Operator Laws (JOL) are having a positive impact.

C-10 Pedestrian Fatalities

For FFY 2020, the performance target is to decrease pedestrian fatalities 5% from the five-year average of 76 in 2017 to 73 by December 31, 2020.

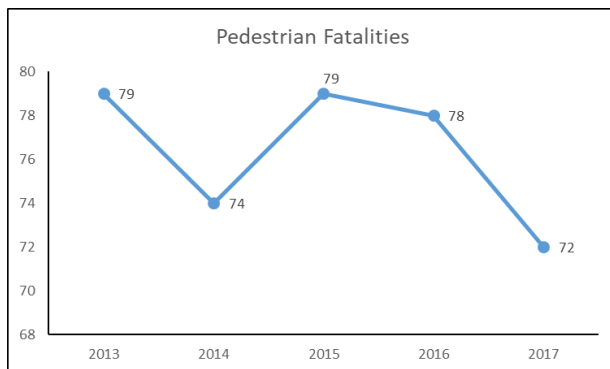


Figure 15: Pedestrian Fatalities, 2013-2017

For the second consecutive year, pedestrian fatalities have declined. Since 2013, fatalities have decreased 9% and the five-year average has gone down nearly 3%. In FFY 2020, OGR will seek to expand the pool of potential applicants to the Pedestrian/Bicycle Enforcement and Equipment Grant Program as well as continue to allow subrecipients the option of spending an allotted percentage of their awarded funding on pedestrian and/or bicycle safety-related equipment such as crosswalk signs and reflectors.

OGR will reach out to communities within Suffolk County (Boston, Revere, Chelsea, Winthrop) to apply for Pedestrian and Bicyclist Enforcement and Equipment Grant Program funding as Suffolk had pedestrians and bicyclist accounting for 48% of all traffic fatalities from 2013-2017. Having Suffolk involved, especially Boston, will help improve pedestrian safety in FFY 2020.

C-12 Bicyclist Fatalities

For FFY 2020 HSP, the performance target is to decrease bicyclist fatalities 5% from the five-year average of 10 in 2017 to 9 by December 31, 2020.

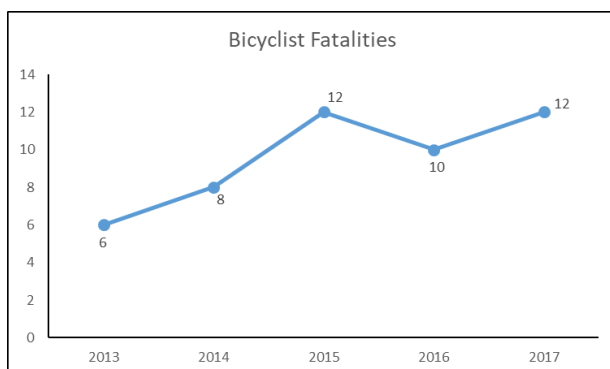


Figure 15: Bicyclist Fatalities, 2013-2017

Bicyclist fatalities rose 20% in 2017 from 10 from 12. The five-year average remained constant at 10. As with pedestrian fatalities, expanding the pool of potential applicant to the FFY 2020 Pedestrian and Bicyclist Enforcement grant will help improve bicycle safety across the Commonwealth.

As mentioned in the pedestrian section above, OGR will reach out and encourage Suffolk County communities to apply for an FFY 2020 Pedestrian and Bicyclist Enforcement and Equipment Grant Program, especially Boston. The capital city saw 6% of its traffic fatalities from 2013-2017 among bicyclists. With the growth of bike rental and share programs like Blue Bikes, the number of bicyclists on the roadways of Boston – whether a resident or visitor – has risen substantially in recent years.

B-1 Observed Seat Belt Usage Rate

For FFY 2020 HSP, the performance target is to increase the observed seat belt usage rate 4% from the five-year average of 77 in 2018 to a five-year average of 80 by December 31, 2020.

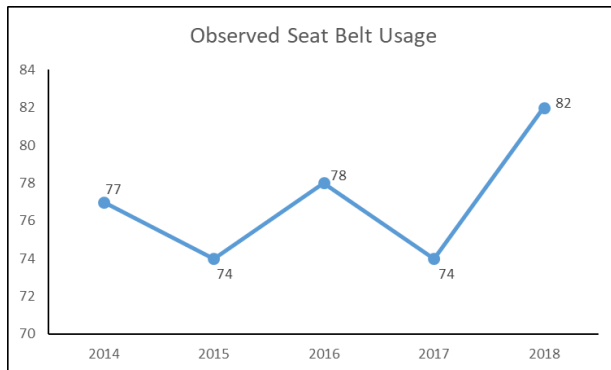


Figure 16: *Observed Seat Belt Usage, 2014-2018*

In 2018, Massachusetts saw a dramatic increase in seat belt usage. Rising from 74% to 82%, it represented a nearly 11% increase in the rate and it also was the highest usage rate ever reported for the state. Despite the rise from 2017 to 2018, OGR is cautiously optimistic the seat belt rate will continue improving in the coming years as evidenced by performance target set for 2020. This caution is due to the history of Massachusetts' seat belt usage rate. Each year the rate rises, the following year the rate falls. Figure 16 shows how unpredictable the usage rate has been since 2014.

OGR will continue messaging the importance of seat belt usage throughout FFY 2020 as well as continue making seat belt violations among one of the key citations to be reported by law enforcement when conducting grant-funded activities.

Non-Core Performance Measure Targets for FFY 2020

NC-1 Distraction-Affected Fatal Crashes

For FFY 2020, the performance target is to decrease the five-year average of distraction-affected fatal crashes 5% from 29 in 2017 to 27 by December 31, 2020. Since 2013, distraction-affected crashes have dropped 46%. This decline is somewhat deceiving as determining whether a distraction, especially the use of a cellphone or electronic device, attributed to a fatal crash has been found quite difficult. Of the 2,322 drivers involving in a fatal crash in Massachusetts from 2013-2017, only 143 were found to be distracted at the time of the collision, a mere 6% of all drivers. Given the popularity of cellphones as well as a multitude of internal (console dials, passengers, eating/drinking) and external (flashing lights, confusing signage, unique landmark) distractions that drivers confront each day, having only 6% of drivers distracted is hard to believe.

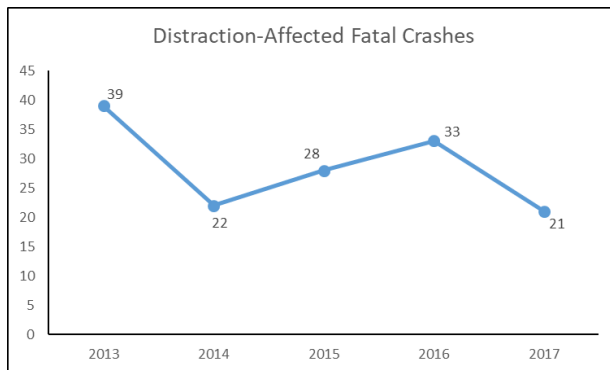


Figure 17: *Distraction-Affected Crashes, 2013-2017*

While there is a multitude of possible distractions for drivers, it is hard for police to definitively prove a distraction, whether internal or external, was a factor in a fatal crash. Lack of eyewitnesses is one issue that hinders police when trying to obtain evidence of distraction. Surviving drivers who don't recall being distracted or fail to mention having been distracted is another issue. Furthermore, the legal and bureaucratic roadblocks to obtaining cellphone records (as well as the time involved) can also discourage law enforcement from pursuing possible driver distraction.

Because of the difficulties inherent when law enforcement tries to determine if a driver in a fatal crash was distracted at the point of impact, OGR has decided to be conservative with a 2020 performance target of 5% despite the nearly 50% drop in distracted-affected crashes since 2013.

Traffic Records Performance Targets for FFY 2020

Performance Target #1:

To develop a business plan for a new MassTRAC and have it approved by the TRCC by December 31, 2019.

Performance Target #2:

To improve the accuracy and completeness of the RMV Crash Data System by decreasing the number of crash reports rejected for not meeting the minimum criteria to be accepted into the system from 1,466 between April 1, 2018, and March 31, 2019, to 1,390 or less between April 1, 2019, and March 31, 2020.

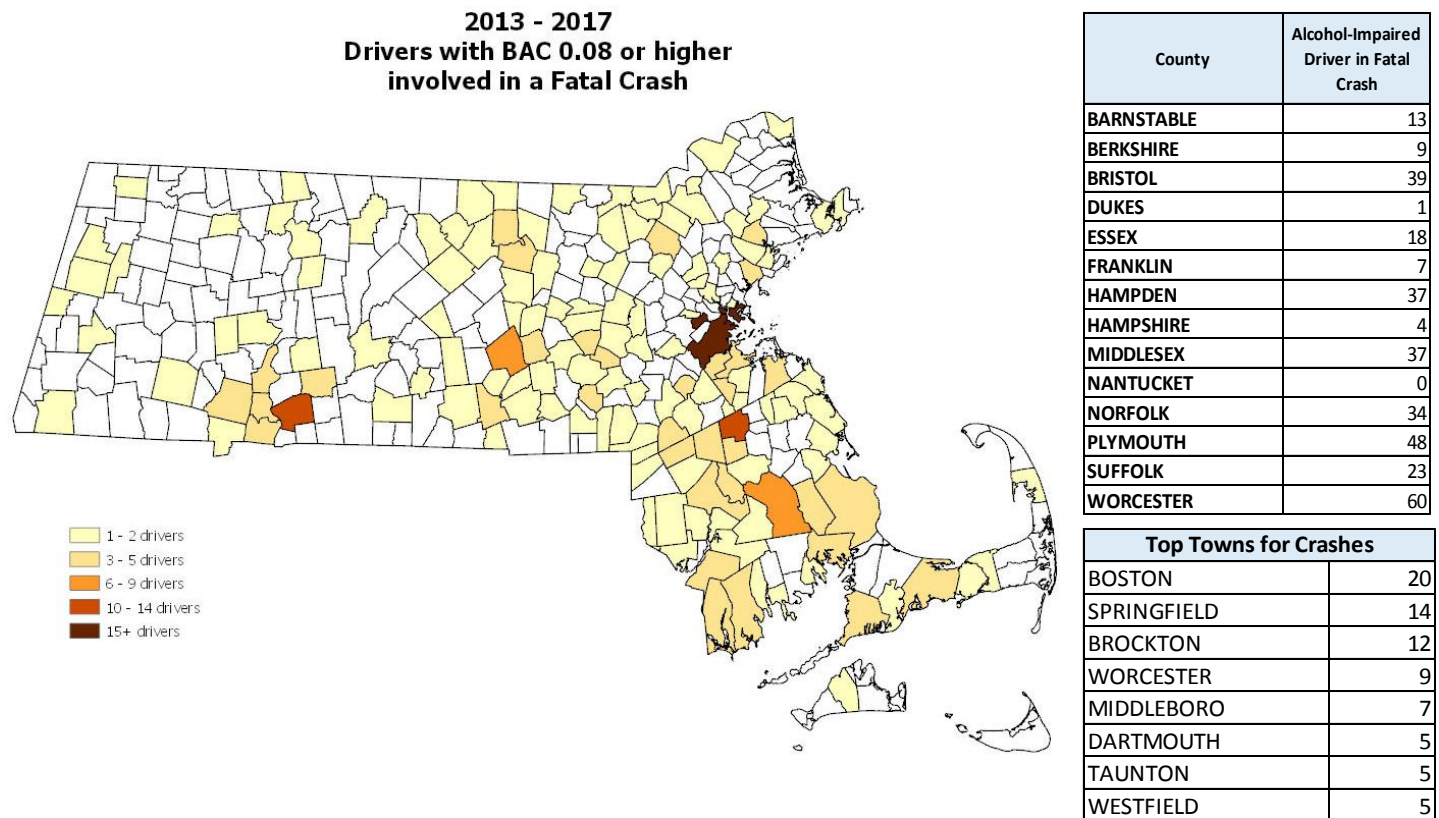
Performance Target #3:

To improve the completeness of the Massachusetts Department of Public Health's Massachusetts Ambulance Trip Record Information System (MATRIS) by increasing the number of ambulance services submitting NEMSIS Version 3 reports to the system from 8 between April 1, 2018 and March 31, 2019 to 220 or more between April 1, 2019 and March 31, 2020.

Program Area: Impaired Driving (AL)

Preventing impaired driving deaths will continue to be a top priority for Massachusetts. In recent years, OGR has funded projects such as Drive Sober or Get Pulled Over mobilizations with state and local police, Educational Outreach to Young Drivers (aimed at high school students), Drug Recognition Expert (DRE) training, Sobriety Checkpoints, Standardized Field Sobriety Test training and the Sustained Traffic Enforcement Program (STEP), all in an effort to reduce impaired driving crashes across the Commonwealth.

In 2017, the number of alcohol-impaired fatalities (involving driving with BAC 0.08 or higher) decreased to 120 from 148 in 2016 - a decline of 19%. This was a welcome development and OGR will continue efforts to further reduce alcohol-impaired fatalities in FFY 2020 by targeting key regions and time frames for high levels of alcohol-impaired fatal crashes.



From 2013-2017, nearly 45% of all alcohol-impaired driver-involved (BAC 0.08 or higher) fatal crashes occurred in three counties, Worcester, Plymouth, and Bristol. Southeastern Massachusetts, Bristol, and Plymouth counties accounted for almost a third of fatal crashes involving an alcohol-impaired driver. Four of the top eight towns for crashes were from this region.

When are these alcohol-impaired drivers crashing? From 2013-2017, fatal crashes involving a BAC 0.08 or higher drivers occurred most frequently between 9 pm and 3 am (nearly 50% of crashes) and most often on Friday, Saturday, and Sunday (64% of crashes). The hours and days with the highest incidences of alcohol-impaired driving are known to be associated with popular times for people to go out drinking and partying. Too often drivers are deciding to get behind the wheel after a late night out instead of opting for sober, safer alternatives such as ride-share services, taxis, public transportation, or designated drivers. OGR began in FFY 2018 and continued in FFY 2019, media messaging aimed at educating people of transportation alternatives to impaired driving. Data results for impaired driving in 2018 is not available but OGR is hopeful the messaging has positively influenced behavior and fatal crashes during these key times and days will prove to have been reduced in 2018 and 2019.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
12am - 2:59am	25	7	4	11	6	16	21	90
3am - 5:59am	18	3	0	1	3	5	12	42
6am - 8:59am	3	1	0	1	2	2	7	16
9am - 11:59am	3	1	0	1	0	0	1	6
12pm - 2:59pm	3	0	3	5	0	1	1	13
3pm - 5:59pm	4	4	4	0	2	4	5	23
6pm - 8:59pm	19	7	3	7	7	8	15	66
9pm - 11:59pm	11	8	9	6	10	12	12	68
Total	86	31	23	32	30	48	74	

Table 1: BAC 0.08 or higher driver involved in a fatal crash, 2013-2017

The age group with the most alcohol-impaired drivers (BAC 0.08 or higher) was 21-29 years old. This group accounted for 35% of the 330 alcohol-impaired drivers in a fatal crash from 2013-2017. As the chart below shows, impaired driver involvement peaks in the 21-29 age group and then gradually declines with age.

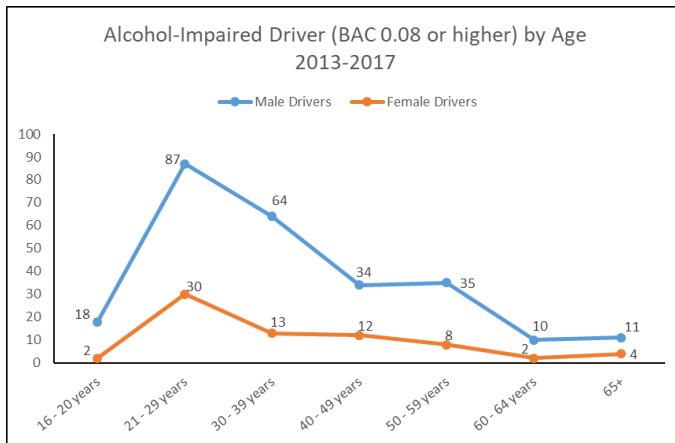


Figure 18: Alcohol-Impaired Drivers by Age Group, 2013-2017

July and June were the top months in terms of percentage of all alcohol-impaired driver crashes from 2013 to 2017. July has Independence Day celebrations and is typically a popular month for cookouts and heading to the beach. June has proms and graduation parties where drinks are imbibed. November, which has 10% of the fatal crashes, has Thanksgiving holiday weekend. These three months accounted for over a third of all BAC 0.08 or higher drivers in a fatal crash.

Month	Total Crashes 2013-2017	Percent of All Fatal Crashes
January	26	8%
February	17	5%
March	18	5%
April	25	8%
May	30	9%
June	35	11%
July	43	13%
August	26	8%
September	31	9%
October	24	7%
November	33	10%
December	22	7%

Table 2: Alcohol-Impaired Drivers (BAC 0.08 or higher) in a Fatal Crash by Month, 2013-2017

To counter these impaired driving challenges in FFY 2020, OGR will have impaired driving mobilizations taking place with “Drive Sober or Get Pulled Over”(DSOGPO) in August and December. State and local law enforcement departments that participate in traffic enforcement mobilizations have the flexibility, based on local data, to do enforcement patrols during other periods of 'high impaired driving' activity.

There will be a larger focus in FFY 2020 to leverage the collaborative efforts of both state and local police departments during sobriety Checkpoints and Saturation Patrols that will occur throughout the year with an emphasis on months, days and times that are the most dangerous. Geographic areas that have the largest regional concentrations

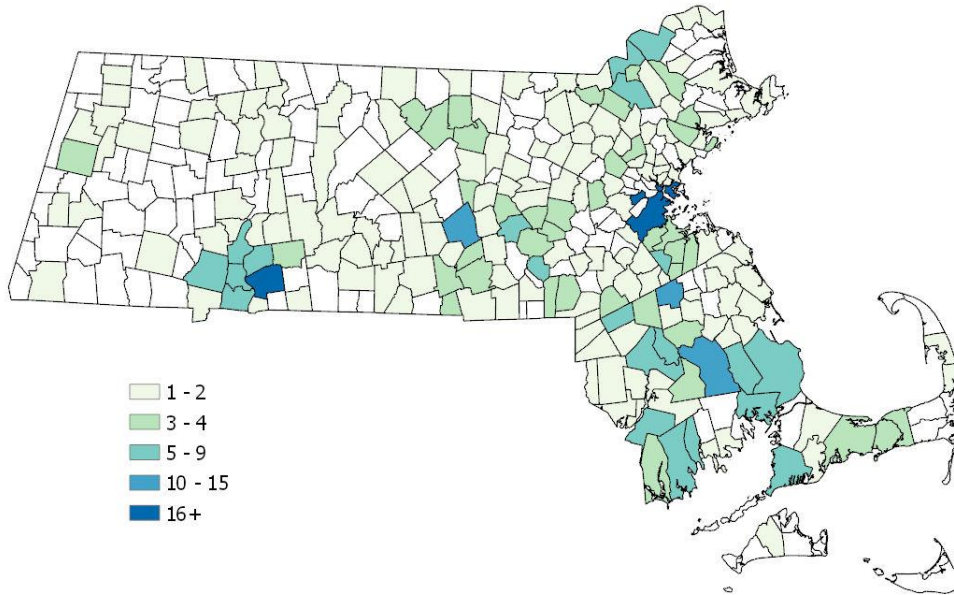
of impaired driving fatalities will be prioritized especially with regard to local participation.

Enforcement would be most effective during on Fridays and Saturdays with a focus from 9 pm to 3 am. Although the DSOGPO mobilizations will not take place during top months (June, July, or November), subrecipient municipalities can opt to conduct extra enforcement patrols during these months with the flexibility built into the traffic enforcement grant program.

While alcohol-impaired driving continues to be a primary concern for OGR, the rise of drug-impaired driving in recent years, combined with the potential increased risk associated with opening adult-use recreational marijuana retail stores in late 2019, will spur increased grant funding to address these road safety threats. For FFY 2020, OGR will have planned activities aimed at reducing the incidences of drug-impaired drivers on the roadways of the Commonwealth.

From 2013-2017, over 200 municipalities had at least one fatal crash involving a driver who was found with drugs in his/her system at the time of the crash. Boston and Springfield had the highest number of fatal crashes. Worcester, Middleborough, and Brockton also reported double-digits for fatal crashes. These five communities accounted for 14% of the drug-involved driver fatal crashes. Worcester led all counties with 17% of fatal crashes, followed by Plymouth (14%) and Middlesex (12%).

**Fatal Crashes involving Drivers with drugs in system
2013-2017**



County	Drug-Impaired Driver in Fatal Crash
BARNSTABLE	22
BERKSHIRE	15
BRISTOL	63
DUKES	2
ESSEX	56
FRANKLIN	19
HAMPDEN	58
HAMPSHIRE	13
MIDDLESEX	68
NANTUCKET	0
NORFOLK	50
PLYMOUTH	81
SUFFOLK	29
WORCESTER	97

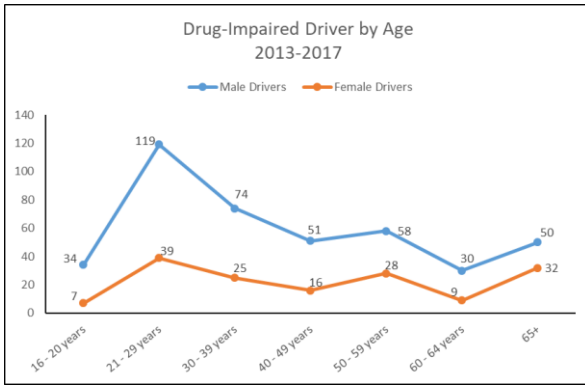
Top Towns for Crashes	
BOSTON	26
SPRINGFIELD	18
BROCKTON	14
MIDDLEBORO	13
WORCESTER	10
FALL RIVER	9
RAYNHAM	9

The most frequent drug found in use by drivers was marijuana. It was found in 175 of the 572 drivers (31%) involved in fatal crashes from 2013-2017. Benzos (short for benzodiazepines) was found in 49 drivers and fentanyl in 44 drivers. Other drugs found: cocaine (36 drivers), morphine (25), buprenorphine (20), oxycodone (18) and benzoyllecgonine (18).

Much like alcohol-impaired driving, a majority of drug-impaired driving crashes occurred over the Friday through Sunday period. The time of day for this type of impairment, however, extends into the daytime, taking place between the hours of 3 pm and 3 am. This time period accounted for over 60% of the crashes.

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
12am - 2:59am	21	10	6	12	4	14	16	83
3am - 5:59am	16	5	1	6	4	8	9	49
6am - 8:59am	6	8	6	11	3	12	11	57
9am - 11:59am	5	7	7	2	6	6	3	36
12pm - 2:59pm	10	9	19	14	6	10	9	77
3pm - 5:59pm	14	13	12	10	11	11	10	81
6pm - 8:59pm	20	11	7	8	9	10	26	91
9pm - 11:59pm	14	11	13	12	12	13	13	88
Total	106	74	71	75	55	84	97	

Table 3: Drugged Drivers by Day and Time Frame, 2013-2017

**Figure 19: Drivers with Drugs in Fatal Crash by Gender, 2013-2017**

As with alcohol-impaired driving, males accounted for a majority of the drivers found with drugs in their system that were involved in a fatal crash. Over 70% of the drivers were male and nearly a third of them were between the ages of 21 and 29. Overall, as with alcohol-impaired driving, the age group of 21-29 accounted for the highest percentage of drivers involved. This age group made up 28% (slightly lower than the 35% for alcohol) of the drivers.

Month	Total Crashes 2013-2017	Percent of All Fatal Crashes
January	33	6%
February	40	7%
March	30	5%
April	49	9%
May	43	8%
June	41	7%
July	62	11%
August	67	12%
September	56	10%
October	56	10%
November	57	10%
December	39	7%

Table 4: Drug-Impaired Drivers in Fatal Crash by Month, 2013-2017

The last element to examine for drugs and drivers is the months of the year. Drivers involved in a fatal crash found with drugs in their system was far more prevalent during the latter half of the year than in the first part. July through December accounted for 60% of the crashes from 2013-2017.

While the number of drivers found with drugs is high, it must be pointed that the figures are simply of drivers found with drugs in their system. In some cases it is not known if the drugs impaired driving ability or contributed to the crash. Gauging drug impairment is a very inexact science and there currently aren't devices available to law enforcement to measure the level of drug 'intoxication' like a breathalyzer can for alcohol impairment. At this time, the best option for law enforcement to determine drug impairment is through the use of Drug Recognition

Experts (DREs). In FFY 2020, OGR will continue funding programs to help train current and new DREs so more will be available across the state to assist with state and local police.

Looking at both alcohol-impaired and drug-impaired driving in the preceding paragraphs didn't take into account that a driver may have mixed substances and be under the influence of alcohol as well as one or more other drugs at the time of a crash, known as poly-drug impairment. The Table 5 below breaks down the driver involvement by alcohol, drugs and lastly, both alcohol and drugs involved.

	2013	2014	2015	2016	2017
Total Drivers Involved in a Fatal Crash	445	455	455	501	469
Alcohol-only (BAC 0.08 or higher), no drugs	24	24	17	27	27
Drug-only (BAC 0.00), no alcohol	50	43	64	76	87
Alcohol (BAC 0.08+) and Drugs Involved	35	41	32	46	57
Total Impaired Drivers	109	108	113	149	171
Percentage of All Drivers	24%	24%	25%	30%	36%

Table 5: Driver Impairment, 2013-2017

The rate of impaired drivers involved in a fatal crash has been increasing from 2013 to 2017. More concerning is the level of drug-involvement and combination alcohol/drug usage at the time of the crash by a driver. While alcohol-only use rose 13%, drug-only use increased 74% and combine impairment went up 63%. OGR plans to continue integrating drug awareness messaging in its FFY 2020 impaired driving campaigns to stem the increased usage of drugs prior to getting behind the wheel. In FFY 2019, outreach related to impaired driving already includes referencing to impact on driving ability after drug usage with a focus on marijuana usage.

Performance Measure for Program Area

C-5 Number of fatalities in a crash involving a driver or motorcycle operator with a BAC of .08 and above

Planned Programming**AL-20-01 Impaired Driving Media**

Develop and implement a statewide paid and earned media campaign to support impaired driving efforts during the Drive Sober or Get Pulled Over mobilizations (December 2019 and August 2020). OGR will use state and national crash and fatality data to identify the target audience. Messaging will focus on alcohol, marijuana, and other drug-impaired driving. Earned media funds will promote and augment the paid campaign while incorporating state laws and highlighting the work of state and local law enforcement agencies. Paid and earned media funds will also be used to direct messaging at teen drivers and their parents as part of the "100 Deadliest Days" from Memorial to Labor Day. OGR will contract with a marketing and advertising agency to execute these paid and earned media campaigns while running social media in-house for sustained educational efforts.

Internal policies will be followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data will be used not only for planning enforcement activities but also to determine the target audiences and media channels used to reach that audience. NHTSA's guidelines will be followed for messaging, demographics, best practices and target groups for each media effort.

Projected Budget: \$ 650,000

Countermeasure Strategy Justification: *Communication Campaign*

OGR has four planned media-oriented campaigns aimed at reducing the frequency of drunk or inebriated driving on the roadways of Massachusetts. Communication and education outreach campaigns are crucial to ensure the messaging about the dangers of impaired driving are consistent and impactful across the state. As with FFY 2019, messaging will target younger drivers (those under 30 years of age) which account for a majority of impaired drivers in a fatal crash, whether under the influence of alcohol, drugs or both. Boston, Springfield, Worcester, and Brockton are key metro areas of focus along with southeastern Massachusetts (Bristol and Plymouth County).

AL-20-02 Local Police Impaired Driving Enforcement

Provide funds for overtime enforcement to local police departments for impaired driving patrols including, but not limited to, the Drive Sober or Get Pulled Over (DSOGPO) mobilizations in December 2019 and August 2020. Patrols will be conducted during high-risk times and locations based on the latest available state and local data.

The eligible subrecipients list will be determined on criteria such as overall crash rates, VMT, crashes per VMT, fatal crashes per VMT, and the percentage of fatal crashes related to speed.

Although not finalized, the number of eligible departments is estimated to be approximately 171.

Projected Budget: \$1,244,000

Countermeasure Strategy Justification: *High Visibility Saturation Patrols*

A saturation patrol consists of a large number of law enforcement officers patrolling a specific area looking for possible impaired drivers. These saturation programs are typically publicized to deter drivers from getting behind the wheel after drinking by making it known there is a perceived risk of arrest. For FFY 2020, local departments will be conducting high visibility saturation patrols – which have been extremely successful in previous years – in an effort to remove drivers who are impaired off the road as well as warn of the legal, financial, and social costs associated with an OUI arrest.

Saturation patrols are extremely effective when conducted during the same month as local impaired driving mobilizations are occurring. From 2013-2017, July and June accounted for 13% and 11%, respectively, of all BAC 0.08 or higher drivers involved in a fatal crash. In contrast, the months of Drive Sober or Get Pulled Over (DSOGPO) enforcement (August and December) accounted for 8% and 7%, respectively. Clearly, the combination of local police enforcement and MSP saturation patrols have an impact on the number of impaired driving crashes occurring in the month in which mobilization takes place. Furthermore, saturation patrols – when done regularly throughout the year – will drive changes in driver behavior as the continuous existence, rather than only being during a specific time frame like DSOGPO, will be a constant reminder of the inherent dangers in drinking and driving.

AL-20-03 MSP and Local Police Sobriety Checkpoint & Saturation Patrols

Provide funds for overtime for approximately 85 sobriety checkpoints and saturation patrols for the MSP with support from the two Blood Alcohol Testing (BAT) mobile units whenever operationally possible. To the greatest extent possible, local police departments will be engaged in these activities.

This planned activity will take place throughout the year in locations across Massachusetts determined through ongoing data analysis. The primary focus of the program is to provide maximum visibility for deterrent purposes and to take immediate and appropriate action on all motor vehicle offenses observed, with particular focus on impaired drivers. A limited, small portion of the program funding will be used for equipment software upgrades related to the checkpoint set up and process.

Projected Budget: \$ 1,505,000

Countermeasure Strategy Justification: *High Visibility Saturation Patrols*

A saturation patrol consists of a large number of law enforcement officers patrolling a specific area looking for possible impaired drivers. These saturation programs are typically publicized to deter drivers from getting behind the wheel after drinking by making it known there is a perceived risk of arrest. For FFY 2020, MSP will be conducting high visibility saturation patrols – which have been extremely successful in previous years – in an effort to remove drivers who are impaired off the road as well as warn of the legal, financial, and social costs associated with a DWI arrest.

AL-20-04 Local Sustained Traffic Enforcement Program (STEP)

Local sustained enforcement of impaired driving laws will be conducted in selected communities. By using detailed data from RMV and FARS, hot-spot communities will be identified as having the highest percentage of crashes in the Commonwealth with fatal or non-fatal injuries. Previous hot spots were Barnstable, Boston, Brockton, Cambridge, Chicopee, Fall River, Framingham, Holyoke, Lowell, Lynn, New Bedford, Quincy, Springfield, Taunton, Westfield, and Worcester. The communities selected to participate for FFY 2020 may be adjusted. Local police departments in the selected areas will receive overtime funding to crack down on impaired driving and other traffic safety focus areas. A portion of the funding may be used for data entry and/or traffic data analysis.

Projected Budget: \$ 600,000

Countermeasure Strategy Justification: *Integrated Enforcement*

Impaired drivers are detected and arrested through regular traffic enforcement and crash investigations as well as through special impaired driving checkpoints and saturation patrols. A third possibility is to integrate impaired driving enforcement into special enforcement activities focused on other offenses such as speeding or lack of seat belt usage, especially since impaired drivers tend to have a high rate of involvement in speed-related crashes and are more likely not to wear a seat belt while driving. In Massachusetts, the Sustained Traffic Enforcement Program (STEP) provides selected communities with the funding to take this integrated enforcement approach to traffic safety. Not only do law enforcement departments patrol for impaired drivers but also for those speeding or driving aggressively, those not wearing a seat belt or have a young child not buckled into a safety restraint seat, and those failing to keep their eyes on the road because of a distraction, especially using or looking at a cell phone. The funding for local STEP participants allows for increased enforcement throughout the year instead of simply during mobilization periods. This funding will help high crash and fatality communities to conduct overtime enforcement to increase traffic safety for both motorists and non-motorists.

AL-20-05 MSP Sustained Traffic Enforcement Program (STEP)

In support of impaired driving laws this task will provide funds to the MSP to deploy sustained and selective "zero tolerance" traffic enforcement overtime patrols on the day/time/location identified by each respective MSP troop. This activity will be conducted to augment local police department efforts within the same general location as outlined in support of the local STEP activities. MSP STEP enforcement patrols will provide maximum visibility for deterrent purposes and saturate target areas, taking immediate and appropriate action on all motor vehicle violations, with particular focus on impaired driving.

Projected Budget: \$ 309,000

Countermeasure Strategy Justification: *Integrated Enforcement*

Impaired drivers are detected and arrested through regular traffic enforcement and crash investigations as well as through special impaired driving checkpoints and saturation patrols. A third possibility is to integrate impaired driving enforcement into special enforcement activities focused on other offenses such as speeding or lack of seat belt usage, especially since impaired drivers tend to have a high rate of involvement in speed-related crashes and are more likely not to wear a seat belt while driving. In Massachusetts, the Sustained Traffic Enforcement Program (STEP) provides MSP with the funding to take this integrated enforcement approach to traffic safety. Not only do MSP troopers patrol for impaired drivers but also for those speeding or driving aggressively, those not wearing a seat belt or have a young child not buckled into a safety restraint seat, and those failing to keep their eyes on the road because of a distraction, especially using or looking at a cell phone. The funding for the MSP STEP allows for increased enforcement throughout the year instead of simply during mobilization periods. This funding will help MSP tackle high crash and fatality rates for both motorists and non-motorists across the Commonwealth.

AL-20-06 Judicial Education Relating to Highway Safety Strategies

This program will support judicial educational opportunities for Massachusetts judges such as attendance at the New England Association of Drug Court Professionals (NEADCP) conference and the Massachusetts Judicial Institute sessions at the annual conference, as well as appropriate out-of-state training and conferences.

MA Trial Court has requested support for more training on DREs and the specific issues raised.

The MA Trial Court plans to send judges to the National Judicial College in Reno, NV for training in FFY 2020. The final number of attendees will be determined once registration fees and travel expenses can be more closely estimated.

The Department Chief will decide who will attend all training.

Projected Budget: \$ 18,135

Countermeasure Strategy Justification: *DWI Courts*

Based on the drug court model, DWI Courts are specialized courts dedicated to changing the behavior of DWI offenders through intensive supervision and treatment. A DWI Court's underlying goal is to change offenders' behavior by identifying and treating their alcohol and/or drug problems and holding offenders accountable for their actions. This planned activity is aimed at improving the knowledge and expertise of the judges and prosecutors involved in DWI Courts. By improving the knowledge base of those involved in the DWI Court system, the correct course of action for offenders can be made with more confidence and ultimately lead to reduced numbers of DWI offenders coming through the courts.

AL-20-07 MSP/ Office of Alcohol Testing/ Breath Test Operator Training

Provide funds to the MSP Office of Alcohol Testing (OAT) to conduct up to 86 Breath Test Operator (BTO) classes for approximately 1,800 local and MSP personnel in an effort to better detect impaired drivers. Training will take place throughout the year at the MPTC, and other facilities. Funds will also be provided for the purchase of related program equipment including Preliminary Breath Test (PBT) units and OUI Toxicology Kits. Equipment will be distributed to local police officers and MSP troopers including those who successfully complete a DRE class conducted by the MPTC. OAT will determine how the equipment is divided among agencies based on problem identification and greatest need.

For the past years, OAT has purchased OUI Toxicology Kits instead of PBTs and prior to those years, PBTs were bought. OAT will determine, through analysis of current inventory and needs of the state as well as local police, what should be purchased in FFY 2020. Regardless of whether it will be OUI Toxicology Kits, PBTs or a combination of both, the amount expected to be spent will be no more than \$50,000.

Projected Budget: \$ 125,000.00

Countermeasure Strategy Justification: *Breath Test Devices*

State and local police utilize breath test devices (typically called PBTs or preliminary breath test) to help establish evidence for a possible DWI arrest. At the current time, Massachusetts, along with 32 other states, use PBTs regularly. Having PBTs allows officers to remove drunk drivers from the road while providing factual evidence of inebriation in the courts that can result in license suspension. In Massachusetts, the first DWI conviction leads to a one-year license suspension; the second DWI, two-year suspensions and ignition interlock device installed. The combination of the loss of driving privileges as well as the threat of losing those privileges will provide deterrence for drivers.

Having more officers certified to use breath test devices and having access to more PBTs will result in more drivers being pulled off the road for impaired operation. Breath test devices help officers gauge the possible impairment of a driver and if more impaired drivers are removed from the roadways, the number of impaired driving fatalities should decrease.

AL-20-08 MSP DRE Training

Funding will be provided to the MSP to expand its Drug Recognition Expert (DRE) program. With the legalization of recreational marijuana and the expansion of the utilization of marijuana for medicinal purposes, MSP troopers are seeing a marked increase in people driving under the influence of this drug. As a consequence of the legalization of retail sales of recreational marijuana, there is a public perception, on the part of some, that the consumption of marijuana while operating a motor vehicle is both safe and legal. Other states that have passed similar legislation have experienced an increase in instances of drug-impaired driving. The MSP will expand the DRE training program and train and equip twelve additional officers to assist troopers on the roadways. MSP's goal is to have at least one certified DRE in each barrack.

Projected Budget: \$ 40,000.00

Countermeasure Strategy Justification: *DRE Training*

As the number of drug-involved fatal crashes has increased in recent years, there is more need than ever to increase the number of Drug Recognition Experts (DREs) among the officers in State and local police. DREs can help determine whether a suspected impaired driver is under the influence of drugs and if so, what drug. While the use of DREs in the court of law has been contested, out in the field these officers provide crucial knowledge and support in the quest to remove drunk and drugged drivers off the road. This planned activity will help increase the number of certified DREs in Massachusetts and ensure there are ample qualified DREs in all corners of the state.

Without the existence of DREs, it would be much tougher for officers to determine whether a driver is under the influence of drugs or not. The need for more DREs is, even more, pressing with the recent legalization of marijuana in Massachusetts.

AL-20-09 MPTC Impaired Driving Law Enforcement Specialized Training Program (SFST)

This program will provide funds to the MPTC to conduct up to 18 trainings throughout the year focused on Standardized Field Sobriety Testing (SFST). The MPTC will provide training to law enforcement officers to help reduce the number and severity of roadway crashes and pedestrian injuries due to alcohol-and-drug related impaired driving. Classes will include SFST Instructor, SFST Instructor Updates, SFST Refresher, and a three-day SFST course to help law enforcement better detect impaired drivers during OUI checkpoints, traffic stops, and at the scene of motor vehicle crashes. Increased awareness of driver impairment by officers will lead to safer roads. Funding will also be used to fund a part-time SFST Coordinator responsible for implementing and maintaining the SFST training program statewide. Training will take place at various police departments across the Commonwealth.

Projected Budget: \$ 60,000

Countermeasure Strategy Justification: *SFST Training*

Standardized Field Sobriety Training classes help law enforcement better detect impaired drivers during sobriety checkpoints, traffic stops and at the scene of motor vehicle crashes. Increased awareness of driver impairment by officers will lead to safer roads as drivers are arrested and eventually have their license suspended for anywhere from one year to a lifetime.

Through the MPTC, SFST classes will be offered at various locations across the state throughout FFY 2020. With an emphasis on attracting more officers from counties with high alcohol-involved crashes, MPTC will offer multiple classes in or near Bristol, Plymouth, and Worcester counties. As more officers are trained in SFST, along with those receiving DRE designation, more impaired drivers will be removed from the roads, therefore making the roadways safer and less dangerous.

AL-20-10 MPTC Drug Evaluation and Classification Program (DEC)

This program will provide funds to MPTC to conduct up to 39 training classes throughout the year for police officers covering Advanced Roadside Impaired Driving Enforcement (ARIDE), Drug Evaluation & Classification (DEC) and a pilot Cannabis and Driving for Law Enforcement (CDLE) training course. Funding will also support a part-time DRE Coordinator to attend DRE-related conferences and seminars and for out-of-state travel to Maricopa County, Arizona for hands-on oversight of field evaluations for students seeking DRE certification. The DRE Coordinator will be required to submit an annual report that details all of the activities of the program. Funding within this program will also be used to develop and maintain a DRE testing database, purchase tablets and associated software subscription for the tablets.

Projected Budget: \$600,000.00

Countermeasure Strategy Justification: *Enforcement of Drug-Impaired Driving*

The impairing effects of alcohol and the dangers of drinking and driving are well-documented. By contrast, there is very little research available examining the potential dangers of drugged driving. Some of the challenges involved in determining a drug's effect on driving include: the constantly changing list of drugs, illegal and legal, that can impair driving; the ambiguous relationship between blood levels of drugs and driving impairment; and the intrusive nature of measuring drug level compared to the most reliable breath tests for alcohol. To counter the unknown surrounding drugged driving, OGR has four planned activities aimed at increasing awareness as well as expertise among law enforcement when it comes to dealing with a possible drugged driver. By participating in SFST training, Massachusetts law enforcement will be better prepared to assess the level of impairment of a suspected drugged driver.

AL-20-11 ABCC Underage Drinking Compliance Checks Program

This program will provide funds to ABCC for overtime pay to conduct enhanced liquor enforcement compliance checks to reduce underage drinking and impaired driving. Overtime funds will be provided to ABCC investigators to perform compliance checks in approximately 125 communities. A compliance check consists of an underage individual, under the supervision of 2 investigators, entering a licensed establishment and attempting to purchase an alcoholic beverage. The Compliance Check program is designed to achieve broad geographical coverage throughout the commonwealth in order to develop a deterrence impact created through wider knowledge among the industry retailers that their establishment could be subject to a compliance check at any time. The ABCC will cover all counties and reach the highest number of municipalities within each county that are feasible. While maintaining this focus, they will try to re-check municipalities found to have a higher than average failure rate in previous years. The ABCC will also include concert and special event enforcement operations consisting of enforcement at liquor stores surrounding large venues (Xfinity Center, Gillette Stadium, Blue Hills Pavilion, and Fenway Park) and venue parking lots prior to the event; with on-premises enforcement during the event. The goal of this program is to prevent the sale of alcohol to individuals under 21 years of age and to prevent young drivers from drinking and driving. The program will take place throughout the year. Municipalities and/or liquor establishments selected for compliance checks will either have a high failure rate of less than 50% compliance in 2018 and 2019, or ABCC hasn't conducted checks in that municipality or liquor establishment to date.

Projected Budget: \$ 195,000

Countermeasure Strategy Justification: *Alcohol Vendor Compliance Checks*

To reduce the sale of alcohol to minors, which lowers the chance of underage drivers from navigating the roads under the influence, the ABCC will utilize funding to focus on restricting access to alcohol by minors through compliance checks. This planned activity will involve monitoring local vendors of alcoholic beverages to ensure that a) they aren't selling alcohol to minors by checking identification and b) they aren't providing alcohol to persons that are clearly drunk or

inebriated. Fewer minors drinking leads to fewer minors being impaired on the roadways and lower the number of young drivers ending up in a fatal crash due to alcohol impairment.

AL-20-12 ABCC Prevent the Sale of Alcohol (SIP) to Intoxicated Persons

Provide overtime funds to the ABCC for investigators to participate in undercover operations at licensed establishments in approximately 40 communities to determine if the licensee serves intoxicated individuals. The ABCC will use data analysis to determine municipalities with the highest concentration of establishments that have been identified as the source of last drink for a convicted drunk driver. The operations will be scheduled in coordination with NHTSA Impaired Driving initiatives, as well as during identifiable times of the year and at specific events where impaired driving is likely to result. Factors such as the number of alcohol-related fatalities and crashes, OUI violations, and sales to minor's violations will be taken into account. Large urban municipalities with a high concentration of liquor establishments (Boston, Worcester) as well as communities with residential colleges or universities will be given priority. The ABCC will focus on the establishments with the largest number of violations, which are listed in their application for funding. The ABCC will also conduct outreach to local police departments to ask if they can identify additional establishments that should be checked.

Projected Budget: \$ 195,000

Countermeasure Strategy Justification: *Alcohol Vendor Compliance Checks*

To reduce the sale of alcohol to minors, which lowers the chance of underage drivers from navigating the roads under the influence, the ABCC will utilize funding to focus on restricting access to alcohol by inebriated individuals through the monitoring of establishments that have been known to provide last drink to an impaired driver prior to being pulled over or involved in a crash. This planned activity will involve ensuring targeted bars and restaurants are complying with directives to cut off alcohol to any patron deemed too inebriated to drive.

AL-20-13 Local Underage Marijuana Enforcement Grant Program

Provide funds to local police departments that have licensed non-medical retail marijuana establishments within their jurisdiction to conduct enforcement activities focused on those businesses. This program will function in a similar manner as the "Cops in Shops" countermeasure used for alcohol law enforcement but instead will be directed at underage marijuana purchasers.

Departments will provide detailed monthly reports on various elements related to marijuana possession, usage, and transportation as well as additional data on any evidence of drugs or drug usage. These activities should lead to a decrease in incidences of drugged driving by young drivers. Subrecipients will be selected based upon data provided along with key problem identification areas for their respective community such as number of marijuana-related motor vehicle traffic fatalities involving persons under 21, number of OUI drug arrests, and number of arrests made for marijuana possession by persons under age 21.

Projected Budget: \$ 50,000.00

Countermeasure Strategy Justification: *Enforcement of Drug-Impaired Driving*

The impairing effects of alcohol and the dangers of drinking and driving are well-documented. By contrast, there is very little research available examining the potential dangers of drugged driving. Some of the challenges involved in determining a drug's effect on driving include: the constantly changing list of drugs, illegal and legal, that can impair

driving; the ambiguous relationship between blood levels of drugs and driving impairment; and the intrusive nature of measuring drug level compared to the most reliable breath tests for alcohol.

By participating in this planned activity, Massachusetts law enforcement will help OGR better understand the impact of marijuana on driving ability.

AL-20-14 Stakeholders Conference

One goal will be to fund conferences and training for traffic safety stakeholders in FFY 2020. As in previous years, topics will include alcohol and drug-impaired driving, occupant protection, distracted driving, motorcycle safety, pedestrian and bicyclist safety, traffic records, prosecution and adjudication, and speeding.

A second goal will be to initiate a dialogue with key local, state, federal, non-profit, and private sector leaders to identify highway safety program priorities, improve traffic safety, and establish focus areas for the FFY 2021 HSP. Locations and dates of conferences are yet to be determined.

Projected Budget: \$ 25,000

Countermeasure Strategy Justification: *Communication Campaign*

By reaching out to stakeholders in traffic safety, OGR looks to better improved its focus and funding of critical programs that will make the roadways safer for motorists and non-motorists alike.

AL-20-15 Higher Education Impaired Driving Media Program

Provide grant funds to a college or university to develop an impaired driving media campaign that resonates with younger drivers. The competitive grant award will be given to an academic department such as journalism, marketing, or one related to video/advertising production. It will be required that a department faculty member oversees the project including paying for student stipends, supplies, production costs, and travel. The university will not be reimbursed for faculty salary or related costs. NHTSA funds will pay for student stipends. NHTSA funding will also be used for program-related supplies, production costs, and travel costs incurred by students and faculty.

The intent is to generate messaging that is conceptualized, developed, produced, and disseminated by young people to their peers. The end product(s) may be disseminated via social or earned media. The student workers will be given day-to-day guidance from the faculty member and also be able to work with the OGR staff and media vendor for additional direction. It is hoped that the end product(s) will be accepted by the target audience as peer-to-peer messaging, as opposed to government messaging.

Projected Budget: \$ 10,000.00

Countermeasure Strategy Justification: *Communication Campaign*

This planned activity will fully support OGR's impaired driving media message of educating motorists, especially drivers, of the dangers of driving under the influence of either alcohol or drugs. This planned activity will result in an impaired driving campaign aimed at college-age drivers and passengers, which will help increase awareness in the 16-25 age group.

AL-20-16 Community-Based Impaired Driving Grant Program

Competitive grant awards will be provided to one or more organizations such as Girl Scouts, Boy Scouts, PTOs, schools, faith-based and advocacy groups, etc., that will implement community-based programs. The eligible applicants may include both non-profit 501(c)(3) or governmental agencies.

This planned activity will consist of one or more data-driven competitive grant programs that will be focused on geographical areas and/or high-risk populations that have demonstrated need in the area of impaired driving.

The programs will generally be focused on raising awareness of road safety, training, and changing social attitudes and behaviors in order to reduce vehicle crashes and their associated fatalities, serious injuries and economic losses on the state's roadways.

This will not be a traffic enforcement program, but OGR will encourage applicants to develop new or enhance existing partnerships with law enforcement agencies to achieve project goals.

Selected grant subrecipients will develop and implement traffic safety improvement educational and awareness programs that address issues in their targeted communities. Programs that focus on high-risk groups or behaviors will be prioritized. Organizations will be encouraged to build partnerships that incorporate a whole-community, data-driven approach to identifying and addressing road safety problems. The formation of community-wide road safety coalitions that bring together a wide constituency to focus on aspects of road safety will also be encouraged.

Projects that will develop and implement an educational curriculum that aims to install a life-long road safety culture in the Commonwealth's citizenry will also be prioritized. Projects may also incorporate social, and/or traditional media strategies to change risky behavior on the state's roadways.

The competitive grant solicitation may guide potential applicants to various informational resources such as:

- National Highway Traffic Safety Administration
- Centers for Disease Control and Prevention
- Governors Highway Safety Association
- Insurance Institute for Highway Safety
- National Safety Council
- American Automobile Association
- The Vision Zero Network
- Mothers Against Drunk Driving
- Students Against Destructive Decisions

Projected Budget: \$ 25,000.00

Countermeasure Strategy Justification:

Communication Campaign

This planned activity will fund one or more local community organizations to develop and implement awareness and education initiatives that will promote OGR's overarching impaired driving messaging theme of not driving while under the influence of alcohol or drugs. The goal of the planned activity is to lower fatalities related to impaired driving within the community or communities being funded.

AL-20-17 Program Management – Impaired Driving

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, postage, and office supplies.

Projected Budget: \$ 230,393

Countermeasure Strategy Justification: *OGR Program Management*

The day-to-day operation of OGR requires funding to allow staff to properly oversee the impaired driving program. Lack of oversight due to reduced or no funding could lead to increased impaired driving fatalities on the roadways of Massachusetts.

Program Area: Occupant Protection (OP)

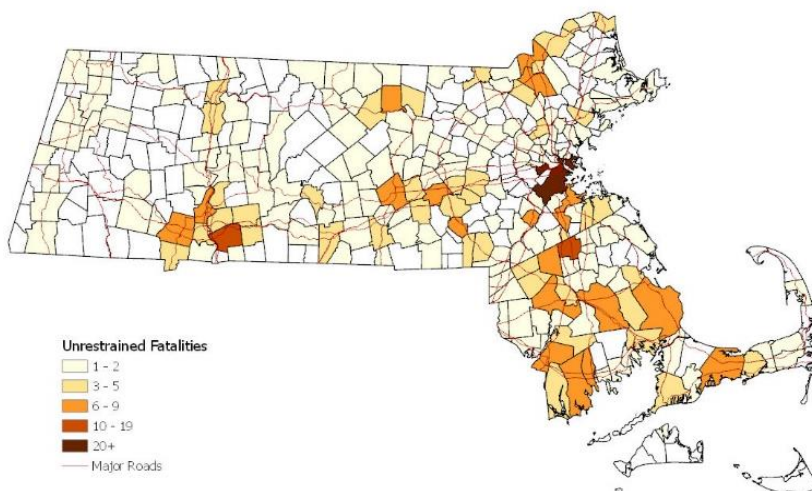
Occupant protection refers to the use of seat belts, motorcycle helmets, booster seats, and child passenger safety (CPS) seats by motor vehicle occupants. Research has found that lap/shoulder seat belts, when used, reduce the risk of fatal injury to front-seat passenger car occupants by 45 percent and the risk of moderate-to-critical injury by 50 percent. In 2017, seat belts in passenger vehicles saved an estimated 14,955 lives of occupants five years of age and older. An estimated 325 child occupants four years old and younger were saved by the use of child restraints (*Traffic Safety Facts: Lives Saved in 2017 by Restraint Use and Minimum-Drinking-Age Laws*, NHTSA, Report No. DOT HS 812 683). Despite the tremendous reduction in fatal injuries from seat belts, Massachusetts has not implemented a primary enforcement law which allows law enforcement to stop drivers for failure to wear a seat belt. Currently, Massachusetts has a secondary enforcement seat belt law where police can issue citations only if the reason for pulling over the driver was related to another offense (i.e. speeding, going through a red light).

The annual Statewide Observational Seat Belt Survey, a requirement for occupant safety funding by NHTSA, has shown that Massachusetts has consistently ranked among the worst performing states year after year. From 2013 to 2017, the average usage rate for Massachusetts was 76%. By comparison, the average national rate (per the National Occupant Protection Use Survey aka NOPUS) for the same period was 88.4% and for all non-primary law states it was 81.2%. In New England, the three states with a primary seat belt law, Connecticut, Maine, and Rhode Island have average five-year seat belt rates of 87, 86, and 87 percent, respectively.

From 2013 to 2017, unrestrained occupant fatalities in Massachusetts jumped from 100 to 131. During the same period other New England states like Connecticut and Maine saw fatalities drop (3.6% and 32%, respectively), while Rhode Island increased from 19 to 24 percent. In Rhode Island, their unrestrained fatalities as a percentage of all fatalities from 2013-2017 were 29% compared to Massachusetts' 31%. Though the relationship between unrestrained fatalities and seat belt usage rate is not scientifically correlated, it is instructive of the importance of having a primary seat belt law.

Given the less than positive results for Massachusetts described above, the 2018 Statewide Observational Seat Belt Survey resulted in the highest rate ever reported for the state. It was also the biggest single-year increase of any state over the last 5 years. During the survey period, a total of 28,265 drivers and front outboard passengers in a total of 24,145 were observed across 148 locations. The statistically weighted percentage of front seat occupants using seat belts was **81.6%**. It is a testament not only to the efforts by OGR but also to every state and local police officer that put in the time to enforce occupant safety while conducting enforcement patrols and checkpoints. Each percentage point increase in seat belt usage, the number of motor vehicle occupants suffering life-threatening or life-altering injuries decreases. This is why Massachusetts continues to make occupant protection safety a top priority of its highway safety program.

**2013-2017
Unrestrained Fatalities by Town**



From 2013 to 2017, there were 549 unrestrained fatalities across Massachusetts. Unrestrained fatalities accounted for 41% of all motor vehicle occupant fatalities. Four counties – Worcester, Bristol, Plymouth, and Hampden – had over half the unrestrained fatalities reported. Worcester, with a number of major routes running through it (I-90, I-395, I-190, I-290, Route 9), lead all counties with 18% of all unrestrained fatalities. The city of Worcester was not the top community. That position was held by Boston with 27 unrestrained fatalities. Springfield was second with 16. Southeastern Massachusetts (Bristol/Plymouth) accounted for 25% of all unrestrained fatalities.

County	Driver Fatalities	Passenger Fatalities	Total Occupant Fatalities	Total Unrestrained Occupant Fatalities	Percent Unrestrained of Total Occupant Fatalities for County	Percent of All Unrestrained (n=549)
BARNSTABLE	49	9	58	24	41.4%	4.4%
BERKSHIRE	30	10	40	16	40.0%	2.9%
BRISTOL	146	29	175	73	41.7%	13.3%
DUKES	3	0	3	1	33.3%	0.2%
ESSEX	86	20	106	45	42.5%	8.2%
FRANKLIN	25	3	28	17	60.7%	3.1%
HAMPDEN	111	30	141	60	42.6%	10.9%
HAMPSHIRE	27	5	32	12	37.5%	2.2%
MIDDLESEX	137	18	155	53	34.2%	9.7%
NANTUCKET	0	0	0	0	0.0%	0.0%
NORFOLK	99	29	128	54	42.2%	9.8%
PLYMOUTH	141	33	174	67	38.5%	12.2%
SUFFOLK	56	17	73	30	41.1%	5.5%
WORCESTER	183	39	222	97	43.7%	17.7%
Total	1,093	242	1,335	549		

Table 6: Occupant Fatalities and Unrestrained Fatalities by County, 2013-2017

Franklin County, which is located in the northwest-central region of Massachusetts, had the highest percentage of unrestrained fatalities of all its occupant fatalities with 60.7%. The next closest county was Worcester with 43.7%.

Top 15 Cities	Total Unrestrained Fatalities (2013-2017)
BOSTON	27
SPRINGFIELD	16
BROCKTON	12
FALL RIVER	9
PLYMOUTH	9
MIDDLEBORO	8
WESTBORO	8
DARTMOUTH	7
EASTON	7
HOLYOKE	7
NORWOOD	7
RANDOLPH	7
TAUNTON	7
WESTFIELD	7
WORCESTER	7

Table 7: Top Communities for Unrestrained Fatalities, 2013-2017

Boston reported the highest total number of unrestrained fatalities from 2013-2017, likely due to the high population and density and a large number of major highways (Mass Pike, I-93, Route 1, Route 9) running through the capital city. As part of Suffolk County, Boston accounted for 27 of the 30 unrestrained fatalities that occurred in the county.

Of the top fifteen communities listed in Table 7, seven were from southeastern Massachusetts (Brockton, Dartmouth, Easton, Fall River, Middleboro, Plymouth, and Taunton). Collectively, these seven cities accounted for 11% of the 549 unrestrained fatalities from 2013-2017. OGR will make every effort to get as many southeastern towns and cities involved in occupant protection grant activities, such as the Click It or Ticket mobilization, in FFY 2020.

With the key municipalities and regions of Massachusetts for unrestrained fatalities identified, a look at data related to day-of-week, time-of-day, month, age of deceased, and roadway type will provide further insight to key areas of focus for FFY 2020 occupant protection activities.

Table 8 below shows the breakdown of unrestrained fatalities by day-of-week and time of day (in three-hour sections). The time from 12 am – 2:59 am on Saturday and Sunday

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Total
12am - 2:59am	27	10	7	15	4	15	32	110
3am - 5:59am	20	2	1	4	6	9	10	52
6am - 8:59am	7	4	3	12	8	13	8	55
9am - 11:59am	7	6	3	5	8	7	4	40
12pm - 2:59pm	7	8	11	8	7	9	6	56
3pm - 5:59pm	11	9	17	8	6	10	9	70
6pm - 8:59pm	14	8	13	7	4	10	11	67
9pm - 11:59pm	14	12	13	11	9	17	14	90
	107	59	68	70	52	90	94	

Table 8: Unrestrained Fatalities by Time Frame and Day-of-Week, 2013-2017

accounted for half of all unrestrained fatalities reported during that time frame. In fact, the 12 am – 2:59 am period was the top time across all days of the week with 20% of unrestrained

fatalities. Adding in 9 pm – 11:59 pm, the percentage of all unrestrained fatalities jumps to 36%. In all, the data clearly

shows any unrestrained-focused enforcement patrols or checkpoints should take place between the hours of 9 pm and 3 am on Saturdays and Sundays.

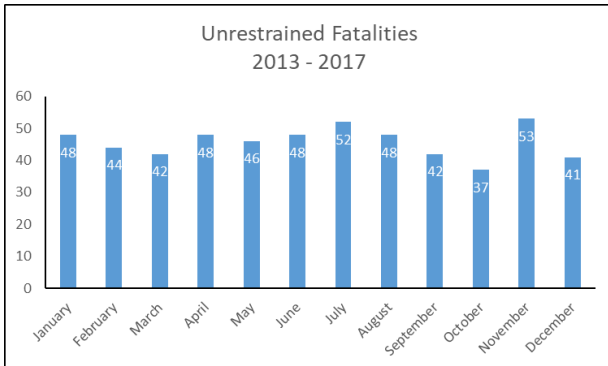


Figure 20: Unrestrained Fatalities by Month, 2013-2017

Unrestrained fatalities were highest during the months of July and November from 2013-2017. The number reported for July is likely attributed to more people driving in the warm weather and staying out later at night during the weekends. November does have an abnormally high number of unrestrained fatalities on Wednesdays (10) compared to the other months (January and May both had next highest, 8 fatalities). With Thanksgiving falling on Thursday each year, it's possible due to more people being out at night prior to the holiday.

Age Range	Unrestrained		
	Male	Female	Total
1 - 9	2	2	4
10 - 15	2	2	4
16 - 20	37	23	60
21 - 29	108	41	149
30 - 39	66	26	92
40 - 49	31	16	47
50 - 59	61	21	82
60 - 64	23	7	30
65 +	47	34	81
Total	377	172	

Table 9: Unrestrained Fatalities by Age and Gender, 2013-2017

Male occupants accounted for 69% of unrestrained fatalities from 2013-2017, with nearly a third coming from the age range of 21-29. Female occupants also saw the highest fatalities coming from the 21-29 age range as well, representing 24% of female unrestrained deaths. Overall, the age range from 16 to 39 was responsible for 55% of the 549 fatalities.

Impaired driving and speeding both factor heavily in the high level of unrestrained fatalities among occupants under 40 years of age. From 2013-2017, unrestrained fatalities found with a BAC of 0.08 or higher accounted for 32% of all fatalities. Those found with drugs in their system accounted for 52% of the fatalities.

	Fatalities	Speeding Involved
Found with:		
Alcohol (BAC .08 or higher)	178	75
Drugs (any type)	287	115
Age Range (Under 40):		
Alcohol (BAC .08 or higher)	112	58
Drugs (any type)	171	87

Table 10: Alcohol or Drug use in Unrestrained Fatalities, 2013-2017

Of the 178 alcohol-impaired fatalities, 112 (63%) were age 39 or younger and of the 287 drug impaired fatalities, 171 (60%) were age 39 or younger.

Speeding was involved in over half of the unrestrained fatalities involving occupants under age 40 – both with alcohol (52%, 58 of 112) and with drugs (51%, 87 of 171). Occupants under age 40

accounted for 77% of all speed-related alcohol unrestrained fatalities and 76% of all speed-related drug unrestrained fatalities.

Over the last five Seat Belt Usage Observation Surveys (2014-2018) seat belts were worn more often by those on interstate roadways than those on arterial or local roads. Interstate users averaged an 80% usage rate while arterial and local were in the mid-to-low 70s. Surprisingly, the unrestrained fatalities during the 2013-2017 period revealed a lack of seat belt usage is more prevalent than expected. Twenty-two percent of unrestrained fatalities took place on interstate roadways, second only to principal arterial, which accounted for 23% of fatalities. Speeding, which was involved in a third of all interstate fatalities, was a factor in over half the local unrestrained fatalities reported. Arterials (principal and minor) accounted for 44% of all unrestrained fatalities and 41% of all speed-related unrestrained fatalities.

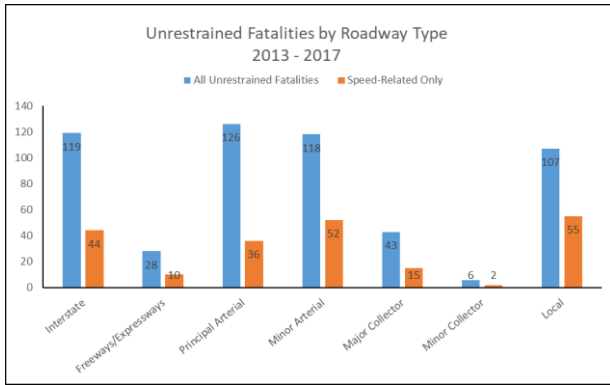


Figure 21: Unrestrained Fatalities and Speeding by Roadway Type

The data provided in this section shows that for FFY 2020 media messaging and grant funding for occupant protection focused programs such as Click It or Ticket may be best geared toward the southeastern Massachusetts region, Metro Boston, Springfield, and Worcester with the intent of influencing potential occupants under the age of 40.

Furthermore, enforcement activity related to occupant protection may be heightened during the months of July and November, which are the months with the highest unrestrained fatalities. In terms of

time-frame for law enforcement to conduct overtime funded activities, the period from Friday to Sunday with emphasis on the hours between 3 pm and midnight may have the greatest impact.

Alcohol (which is discussed in more detail in the Impaired Driving section) and speeding (covered in the Speed Management section) have both been shown to be common factors in unrestrained fatalities, especially those involving occupants under 40 years of age. OGR plans to incorporate messaging about drinking and speeding into outreach on seat belt safety, with urban (Boston, Springfield, Worcester) areas touting the importance of utilizing public transportation or car services such as Uber or Lyft.

Performance Measure for Program Area

C-4 Number of unrestrained passenger vehicle occupant fatalities, all seat positions

B-1 Observed seat belt use for passenger vehicles, front seat outboard occupants

Planned Programming

OP-20-01 Occupant Protection Media

Develop and implement statewide paid and earned media to support occupant protection efforts during the 2020 Click it or Ticket enforcement mobilizations. The target audience of the paid media will be based on the lowest use populations identified in the annual seat belt observation study. Earned media funds will promote the paid media while incorporating state laws and highlighting the work of state and local law enforcement agencies. Paid and earned media funds will also be used to direct messaging at teen drivers and their parents as part of the "100 Deadliest Days" from Memorial Day to Labor Day and to parents and guardians of young children for Child Passenger Safety Week. OGR will contract with a marketing and advertising agency to execute these paid and earned media campaigns while running social media in-house for sustained educational efforts.

Internal policies will be followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data will be used not only for planning enforcement activities but also to determine the target audiences and media channels used to reach that audience. NHTSA's guidelines will be followed for messaging, demographics, best practices and target groups for each media effort.

Projected Budget: \$500,000

Countermeasure Strategy Justification:

Communication Campaign

For FFY 2020, OGR will develop and implement, through a contract with a marketing and advertising vendor, a statewide paid and earned media campaign to support occupant protection efforts during CIOT mobilizations. The target audience of the paid media campaign will be based on the lowest use populations identified in the annual seat belt usage observation survey. Earned media funds will promote the paid campaign while incorporating state laws and highlighting the work of State and local law enforcement agencies. Paid and earned media funds will also be used for direct messaging aimed at teen drivers and their parents as part of the “100 Deadliest Days” campaign from Memorial Day to Labor Day as well as to parents and guardians of young children for Child Passenger Safety Week (September 15-21, 2020).

OP-20-02 Local Police Occupant Protection Enforcement Campaign

In support of occupant protection laws, this Planned Activity will provide funds to local police departments to deploy sustained and selective “zero tolerance” traffic enforcement overtime patrols on the days/times/locations identified in each respective municipality to augment National efforts of the Click It or Ticket (CIOT) mobilization. Local enforcement patrols will provide maximum visibility for deterrent purposes and saturate target areas focusing on seat belt usage and child passenger safety.

The eligible subrecipients list will be determined on criteria such as overall crash rates, VMT, crashes per VMT, fatal crashes per VMT, and the percentage of fatal crashes related to speed.

Although not finalized, the number of eligible departments is estimated to be approximately 171.

Projected Budget: \$ 497,600

Countermeasure Strategy Justification: *Short-term, High Visibility Seat Belt Law Enforcement*

The Click It or Ticket (CIOT) mobilization, conducted concurrently with the national campaign, is usually a two-week period of intense, highly publicized periods of seat belt law enforcement patrols and checkpoints. OGR will also provide communication support for the CIOT mobilization in the form of press releases, online advertising, print and traditional media (radio, television, electronic billboards).

OGR expects the combination of an extensive communications outreach program and targeted enforcement activity during key time frames (Friday thru Saturday, 3 pm to midnight, with focus on Boston, Worcester, Springfield, and southeastern Massachusetts) will lead to higher seat belt usage in the future. In 2018, seat belt usage jumped to 82% from 74% the previous year.

OP-20-03 MSP Occupant Protection CIOT Enforcement Campaign

Provide funds to the MSP for overtime enforcement to participate in two Click It or Ticket (CIOT) mobilizations. One to take place in May 2020 during the national CIOT campaign and one to take place in the Fall of 2019 to coincide with the start of the school year.

Enforcement efforts will focus on increasing compliance with occupant protection laws during the day and night and will take place at times and locations shown to have high incidences of motor vehicle crashes based on the most current state and local crash and citation data. Other violations such as speeding and texting may also be secondarily targeted during these mobilizations.

Projected Budget: \$ 450,000

Countermeasure Strategy Justification: *Short-term, High Visibility Seat Belt Law Enforcement*

The Click It or Ticket (CIOT) mobilization, conducted concurrently with the national campaign, is usually a two-week period of intense, highly publicized periods of seat belt law enforcement patrols and checkpoints. OGR will also provide communication support for the CIOT mobilization in the form of press releases, online advertising, print and traditional media (radio, television, electronic billboards).

MSP will concentrate enforcement and checkpoint efforts along key exit/entry points to major highways across the state such as Mass Pike, I-95, I-93, and I-495 during the hours between 3 pm-midnight. The period from Friday to Sunday morning will be a primary focus of enforcement by MSP.

OP-20-04 Local Police Sustained Traffic Enforcement Program (STEP)

Local sustained enforcement of impaired driving laws will be conducted in selected communities. By using detailed data from MassTRAC, RMV, and FARS, hot spot communities will be identified as having the highest percentage of overall crashes in the Commonwealth and the highest percentage with fatal or non-fatal injuries. Previous hot spots were Barnstable, Boston, Brockton, Cambridge, Chicopee, Fall River, Framingham, Holyoke, Lowell, Lynn, New Bedford, Quincy, Springfield, Taunton, Westfield, and Worcester. The communities selected to participate for FFY 2020 may be adjusted based on updated information. Local police departments in the selected areas will receive overtime funding to crack down on impaired driving and all other traffic safety violations. A limited portion of the funding may be used for data entry and/or traffic data analysis.

Projected Budget: \$ 600,000

Countermeasure Strategy Justification: *Sustained Enforcement*

Local police departments will deploy sustained and focused ‘zero tolerance’ traffic enforcement overtime patrols to target key time frames when occupant protection violations tend to occur within their respective community. The sustained enforcement activities will help decrease unrestrained fatalities across Massachusetts as the selected local police departments include high unrestrained fatality communities of Boston, Fall River, Springfield, and Taunton. By increasing police enforcement patrols in these high fatality cities, OGR expects to see a decline in unrestrained fatalities in the coming years.

OP-20-05 MSP Sustained Traffic Enforcement Program (STEP)

In support of occupant protection laws, this task will provide funds to the MSP to deploy sustained and selective “zero tolerance” traffic enforcement overtime patrols on the day/time/location identified in each respective Troop to augment local STEP departments’ efforts within the same general location. MSP STEP enforcement patrols will provide maximum visibility for deterrent purposes and saturate target areas taking immediate and appropriate action on all motor vehicle violations, with particular focus on seat belt usage, child passenger safety infractions, speed and, aggressive and dangerous driving.

Funds will also be provided to MSP for equipment purchases that include approximately 75 radar units and Automatic License Plate Recognition (ALPR) software upgrades which serve to enhance enforcement efforts towards the overall performance of the program.

Projected Budget: \$ 235,000

Countermeasure Strategy Justification:*Sustained Enforcement*

MSP troops will deploy sustained and focused ‘zero tolerance’ traffic enforcement overtime patrols to target key time frames when occupant protection violations tend to occur within their respective community. The sustained enforcement activities will help decrease unrestrained fatalities across Massachusetts as the selected local police departments include high unrestrained fatality communities of Boston, Fall River, Springfield, and Taunton. By increasing police enforcement patrols in these high fatality cities, OGR expects to see a decline in unrestrained fatalities in the coming years.

OP-20-06 Child Passenger Safety Equipment Grant Program

OGR will provide grants to municipal departments and non-profit agencies, including hospitals, for the purchase of car seats to enhance their child passenger safety (CPS) inspection stations and outreach efforts to low-income families. While the primary purpose of this grant will be to provide seats and education to low-income families, seats may also be distributed when technicians encounter an expired, misused, or damaged seat. Grant subrecipients will be selected based on the quality of their current CPS program, the identification of low-income residents in their coverage area, and their plans for reaching those in financial need of a car seat.

Projected Budget: \$ 225,000

Countermeasure Strategy Justification:*Child Restraint System Inspection Stations*

The misuse and/or incorrect installation of a child restraint seat has been a concern of OGR, medical professionals, and law enforcement for many years. An incorrectly installed car seat or using an outdated child restraint could result in serious or fatal injuries to the child in a motor vehicle crash. Child passenger safety (CPS) inspection stations, also called ‘fitting stations’, are location or events where parents and caregivers can receive instruction from certified CPS technicians on proper installation methods as well as have current car seats examined for usability and safety. In Massachusetts, all CPS grant subrecipients are required to offer at least two ‘fitting stations’ along with regular hours (at least once a week) where parents and caregivers can go to for instruction, inspection, and education regarding car seats.

Through these ‘fitting stations’ attendees increase their knowledge on how to better restrain young passengers so a child’s risk of injury in a crash is greatly reduced. Furthermore, attendance at these ‘fitting stations’ by parents and caregivers will lead to them passing on this information about car seats to other parents, family, and friends – thus exponentially expanding the reach of critical knowledge about car seats – and encouraging other parents and caregivers to attend ‘fitting stations’ near them.

OP-20-07 Child Passenger Safety Administration and Training

OGR will provide funding to Baystate Medical Center to recruit, train, and maintain a sufficient number of certified Child Passenger Safety (CPS) technicians and instructors in Massachusetts. A minimum of 20 courses will be conducted statewide, including CPS Technician, CPS Technician Renewal, CPS Update, CPS Special Needs, and CPS Ambulance. Additionally, Baystate will coordinate staffing and sign-offs at check-up events, and respond to all calls made to the Statewide CPS Information Line.

Baystate will also continue to provide half-day CPS training monthly at the Massachusetts Department of Children and Families (DCF) statewide training center. This program began as a collaborative pilot effort in January 2018 between OGR and DCF, with one optional training being offered monthly for 3-months to social workers. Social workers are frequently required to transport children in their personal vehicles, yet very few have any car seat knowledge or formal training. Based on the success of the pilot, in April 2018, DCF made it a mandatory training for all social worker technicians. The half-day training is comprised of both classroom and hands-on in-vehicle training, with the goal being

for attendees to know the basics of installation and who to contact if they need further assistance. OGR proposes to continue covering the cost of instructors for these much needed monthly training at the statewide training center. OGR also continues to explore opportunities to enhance this collaboration, by either providing CPS Technician Training to DCF supervisors or by providing the half-day training at DCF's regional area offices around the state.

This planned activity will help law enforcement officers, through CPS training and education, focus on key at-risk groups within Massachusetts: minority (Hispanic/Black), which have consistently have had the lowest seat belt usage rate in the annual statewide seat belt usage observation survey; as well as nighttime drivers (those driving between 6pm - 3am), which have accounted for nearly 50% of all unrestrained fatalities in the last decade (2007-2016). The administrator of the CPS program will focus on offering CPS-related classes in regions with high unrestrained fatalities such as Bristol County, Middlesex County, and Worcester County.

Projected Budget: \$ 170,000

Countermeasure Strategy Justification: *Child Restraint System Inspection Stations*

The misuse and/or incorrect installation of a child restraint seat has been a concern of OGR, medical professionals, and law enforcement for many years. An incorrectly installed car seat or using an outdated child restraint could result in serious or fatal injuries to the child in a motor vehicle crash. Child passenger safety (CPS) inspection stations, also called 'fitting stations', are location or events where parents and caregivers can receive instruction from certified CPS technicians on proper installation methods as well as have current car seats examined for usability and safety. In Massachusetts, all CPS grant subrecipients are required to offer at least two 'fitting stations' along with regular hours (at least once a week) where parents and caregivers can go to for instruction, inspection, and education regarding car seats.

As the administrator of the statewide CPS program, Baystate Medical will offer CPS-related training classes for state and local law enforcement officers across the Commonwealth. Attendees will not only learn how to properly install and inspect car seats but also learn about various aspects of child passenger safety that can also be passed on to caregivers and parents alike. Having better-educated caregivers and parents as well as properly installed car seats will lead to lower unrestrained child fatalities.

OP-20-08 Child Passenger Safety Statewide Information Line

Provide funding for landline telephone services so the designated CPS Administrator may respond to all calls made to the Statewide CPS Information Line. The Statewide CPS Administrator will keep a log of all calls which will be submitted to OGR on a monthly basis.

Projected Budget: \$ 1,100

Countermeasure Strategy Justification: *Communication Campaign*

By offering a method to communicate with the CPS Administrator regarding any CPS issues citizens may have, OGR is improving the quality of information and knowledge about car seat safety by caregivers and parents across the state. More knowledgeable parents lead to children better secured in their car seat and lower fatalities for children in motor vehicle crashes.

OP-20-09 Statewide Seat Belt Usage Observation Survey

Provide funding for a competitively-selected vendor to conduct the statewide seat belt usage observation survey utilizing NHTSA methodology. This survey is required of all states by NHTSA and will take place following the May Click It or

Ticket (CIOT) Mobilization. This survey will capture demographic data to assist in measuring performance and targeting future occupant protection programs. A final report will be submitted to OGR for review and dissemination.

Projected Budget: \$ 150,000

Countermeasure Strategy Justification: *Communication Campaign*

Taking place after the May CIOT mobilization, the statewide seat belt survey is, in a way, a measure of the impact of OGR's media messaging and enforcement grant activity by state and local police. In 2018, the seat belt usage rate was 82%, up from 74% in 2017. This shows the efforts by OGR and its partners are making a positive influence on occupant behavior leading to increase seat belt usage. For FFY 2020, the survey will again be a sounding board on occupant protection messaging and targeted enforcement areas. The results will help drive media messaging and enforcement focus for future occupant protection programs and activities.

OP-20-10 MSP CPS Seat Checkpoints

Funding will be provided to the MSP to conduct car seat checkpoints throughout Massachusetts. MSP has over 30 certified child passenger safety (CPS) technicians on staff and these checkpoints will allow them to provide education and installation assistance to local families while gaining the credits needed for their recertification. Twelve checkpoints will be conducted bimonthly from April-September.

Projected Budget: \$ 40,000

Countermeasure Strategy Justification: *Child Restraint System Inspection Stations*

The misuse and/or incorrect installation of a child restraint seat has been a concern of OGR, medical professionals, and law enforcement for many years. An incorrectly installed car seat or using an outdated child restraint could result in serious or fatal injuries to the child in a motor vehicle crash. Child passenger safety (CPS) inspection stations, also called 'fitting stations', are location or events where parents and caregivers can receive instruction from certified CPS technicians on proper installation methods as well as have current car seats examined for usability and safety.

By funding CPS checkpoints by MSP, OGR is further expanding occupant protection information and knowledge to caregivers and parents by reaching those that may not be able to attend local CPS checkpoints due to factors like distance and time availability. Furthermore, MSP will improve its CPS technician skills and allow those officers needing recertification to be able to complete the hours required.

OP-20-11 "Buckle Up" Road Signage

This program will install permanent "Buckle Up" road signs. Although there have been small improvements, Massachusetts still ranks well below the national average for seat belt use. With over 500 unbelted fatalities from 2013-2017, it is clear that the state has much more work to do and needs to try new approaches. The FAST Act has allowed for projects that promote public awareness of highway safety matters or enforces highway safety laws. Between 150 and 500 signs, which will adhere to USDOT code and installed across the Commonwealth. The most recent seat belt usage data and other key research data will be used to determine locations. Based on data for seat belt use, the signs will likely be placed on non-interstate roadways with a focus on more urban population centers. Information regarding vehicle counts and data on driving populations/demographics, when available, will help further customize sign locations.

Projected Budget: \$ 250,000

Countermeasure Strategy Justification: *Communication Campaign*

The “Buckle Up” planned activities will support the overarching goal of OGR’s media messaging campaign for occupant protection which is to get occupants to buckle up every time they get into a motor vehicle. Putting “Buckle Up” signs around the state, especially in locations where occupants can view easily (along the road near the stop sign, yield sign, or stoplight) and in proximity to roadways or areas known for high levels of unrestrained fatalities.

OP-20-12 Higher Education Occupant Protection Media Program

Provide grant funds to a college or university to develop a seat belt media campaign that resonates with younger drivers. The competitive grant award will be given to an academic department such as journalism, marketing, or one related to video/advertising production. It will be required that a department faculty member oversees the project including paying for student stipends, supplies, production costs, and travel. The university will not be reimbursed for faculty salary or related costs. NHTSA funds will pay for student stipends. NHTSA funding will also be used for program-related supplies, production costs, and travel costs incurred by students and faculty.

The intent is to generate messaging that is conceptualized, developed, produced, and disseminated by young people to their peers. The end product(s) may be disseminated via social or earned media. The student workers will be given day-to-day guidance from the faculty member and also be able to work with the OGR staff and media vendor for additional direction. It is hoped that the end product(s) will be accepted by the target audience as peer-to-peer messaging as opposed to government messaging.

Projected Budget: \$ 10,000

Countermeasure Strategy Justification: *Communication Campaign*

This planned activity will fully support OGR’s occupant protection primary media message of getting occupants to wear seat belts each and every time they get into a motor vehicle by utilizing young drivers (18 – 21 years of age) in creating a seat belt wearing campaign that will have an impact on young drivers. Along with OGR’s general messaging aimed at Massachusetts motor vehicle occupants, the college-developed campaign will help improve seat belt usage among younger occupants and lower unrestrained fatalities.

OP-20-13 Community-Based Occupant Protection Program

Competitive grant awards will be provided to one or more organizations such as Girl Scouts, Boy Scouts, PTOs, schools, faith-based and advocacy groups, etc., that will implement community-based programs. The eligible applicants may include both non-profit 501(c)(3) or governmental agencies.

This planned activity will consist of one or more data-driven competitive grant programs that will be focused in geographical areas and/or high-risk populations that have demonstrated need in the area of occupant protection.

The programs will generally be focused on raising awareness of road safety, training, and changing social attitudes and behaviors in order to reduce vehicle crashes and their associated fatalities, serious injuries and economic losses on the state’s roadways.

This will not be a traffic enforcement program, but OGR will encourage applicants to develop new or enhance existing partnerships with law enforcement agencies to achieve project goals.

Selected grant subrecipients will develop and implement traffic safety improvement educational and awareness programs that address issues in their targeted communities. Programs that focus on high-risk groups or behaviors will be prioritized. Organizations will be encouraged to build partnerships that incorporate a whole-community, data-driven approach to identifying and addressing road safety problems. The formation of community-wide road safety coalitions that bring together a wide constituency to focus on aspects of road safety will also be encouraged.

Projects that will develop and implement an educational curriculum that aims to install a life-long road safety culture in the Commonwealth's citizenry will also be prioritized. Projects may also incorporate social, and/or traditional media strategies to change risky behavior on the state's roadways.

Projected Budget: \$ 25,000

Countermeasure Strategy Justification: *Communication Campaign*

This planned activity will fund one or more local community organizations to develop and implement awareness and education initiatives that will promote OGR's overarching occupant protection messaging theme of wearing a seat belt each and every time in a motor vehicle. The ultimate goal of the planned activity is to lower occupant fatalities within the community or communities being funded.

OP-20-14 Occupant Protection Program Assessment

OGR will call on NHTSA to conduct a review of the Occupant Protection Program in Massachusetts to identify gaps, needs, and strengths for improving strategies and programming. NHTSA recommends each State, in cooperation with its political subdivisions and tribal governments, and other parties as appropriate should develop and implement a comprehensive highway safety program, reflective of state demographics, to achieve a significant reduction in traffic crashes, fatalities, and injuries on public roads.

Projected Budget: \$ 50,000

Countermeasure Strategy Justification: *Occupant Protection Program Assessment (NHTSA Facilitated)*

This planned activity is recommended by NHTSA every 5-8 years to assess the quality and effectiveness of Massachusetts' Occupant Protection program. After the assessment concludes, NHTSA provides feedback that Massachusetts will utilize to improve the program that will lead to lower unrestrained fatalities on the roadways.

OP-20-15 Child Passenger Safety Conference

Funding a one-day child passenger safety (CPS) conference on October 18, 2019, that will be open to all technicians and instructors from Massachusetts and, if space permits, other Region 1 states. Attendees will have the chance to earn 6 continuing education units (CEUs) to aid in their recertification. The location and agenda have yet to be finalized. Anticipated costs include renting space and speaker fees.

Projected Budget: \$15,000

Countermeasure Strategy Justification: *Enhancing CPS Technician skills*

Building on the success of the October 2017 CPS Conference that attracted well over 150 attendees, we will host another CPS Conference in October 2019. It will be open to all CPS technicians and instructors across Massachusetts, as well as other Region I states (if space permits). The conference will provide in-depth presentations on issues related to CPS,

current laws, regulations, car seat standards, and effective installation methods. The conference will provide an effective means of reaching a large number of CPS experts and also give attendees an opportunity to network and exchange ideas, methods, and observations about child passenger safety. Attendees will then bring the new knowledge related to the car seat and child restraint safety back to their respective communities and share it with parents and caregivers through various outreach methods such as fitting stations, educational presentations at local schools and hospitals, and social media.

OP-20-16 Program Management – Occupant Protection

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, postage, and office supplies.

Projected Budget: \$ 194,672

Countermeasure Strategy Justification: *OGR Program Management*

The day-to-day operation of OGR requires funding to allow staff to properly oversee the occupant protection program. Lack of oversight due to reduced or no funding could lead to increased unrestrained fatalities on the roadways of Massachusetts.

Program Area: Speed Management (SC)

Speeding, or aggressive driving, is an ever-present danger on the roadways. In 2017, 26% of traffic fatalities in the U.S. involved speeding with drivers accounting for 73% of all speed-related fatalities. In Massachusetts, speeding was determined to be involved in 28% of all traffic fatalities with drivers accounting for 75% of fatalities. While the national rate for speed-related fatalities dropped from 27% in 2016, Massachusetts saw it rise slightly from 27%.

From 2013 to 2017, there were 489 speed-related fatalities in Massachusetts. Drivers accounted for 70% of all speed-related fatalities, followed by passengers (22%), and pedestrians (5%) and bicyclists (1%). Males represented well over 80% of all drivers and 61% of all passengers.

	Male	Female	Total
Driver	283	60	343
Passenger	68	43	111
Pedestrian	15	9	24
Bicyclist	3	2	5
Unknown	5	1	6
	374	115	

Table 11: Speed-related fatalities by Person Type, 2013-2017

Speed-related fatalities were more likely to occur between Friday and Sunday. Data from 2013-2017 shows this three-day period accounting for over half of all fatalities. Saturday was the worst day for speeding deaths with 101 of 489 fatalities reported.

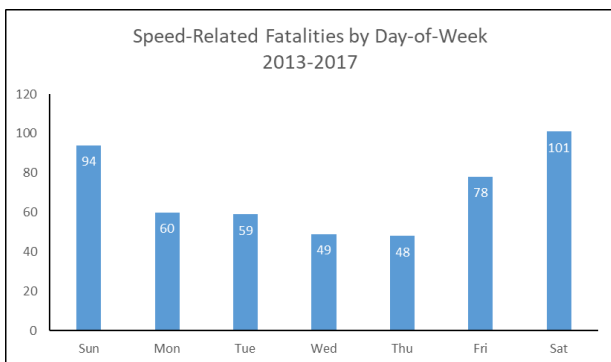


Figure 22: Speed-related fatalities by Day-of-Week, 2013-2017

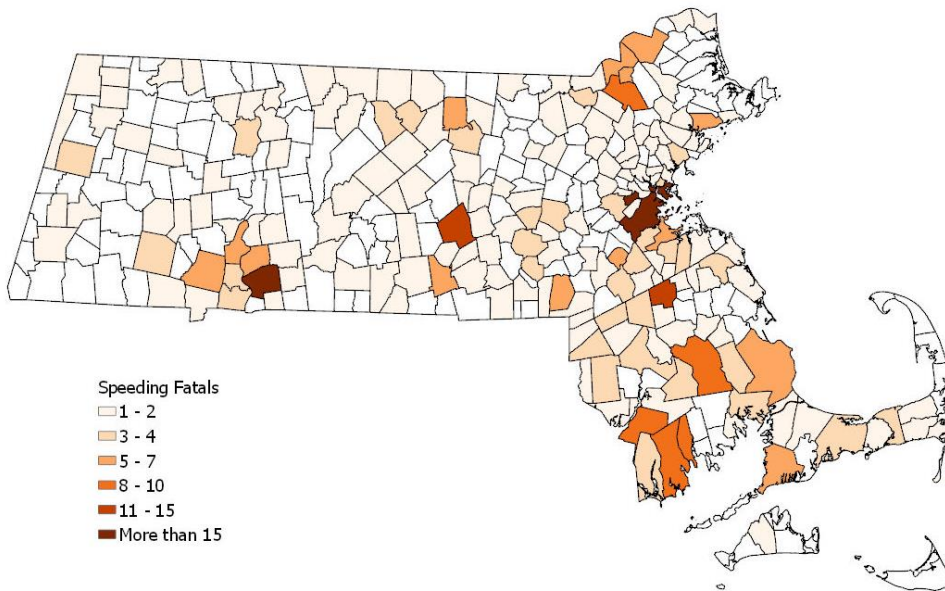
During the week, the time between midnight and 2:59 am in the morning was accounted for 21% of all speeding fatalities, followed by 9 pm to 11:59 pm with 19% of speeding fatalities, and 6 pm to 8:59 pm with 17%. The nine-hour period from 6 pm to 2:59 am was responsible for over 60% of all speed-related fatalities from 2013-2017. On the whole, the PM hours reported more fatalities than AM hours (271 vs 209).

Table 12: Speed-related fatalities by Time Frame and Day-of-Week, 2013-2017

	12am - 2:59am	3am - 5:59am	6am - 8:59am	9am - 11:59am	AM Fatalities	12pm - 2:59pm	3pm - 5:59pm	6pm - 8:59pm	9pm - 11:59pm	PM Fatalities
Sunday	17	19	3	3	42	9	11	19	12	51
Monday	14	3	7	4	28	2	10	10	8	30
Tuesday	3	0	2	1	6	11	10	17	14	52
Wednesday	10	7	4	3	24	3	3	3	15	24
Thursday	6	3	6	3	18	5	5	9	9	28
Friday	18	10	6	4	38	4	7	11	16	38
Saturday	34	10	8	1	53	6	10	14	18	48
Total	102	52	36	19	209	40	56	83	92	271

Where are the speed-related fatalities taking place around Massachusetts? From 2013-2017, Boston was the top community with 26 fatalities and Worcester was the top county with 16% of all speed-related fatalities. Both Boston and Worcester were tops for the 2012-2016 period as well.

Speed-related Fatalities 2013 - 2017



Fifty-five percent of Massachusetts municipalities (195) experienced a speeding-related fatality between 2013 and 2017. After Boston, the next three top communities were Springfield (24 fatalities), Worcester (14), and Brockton (12).

Hampden County had a cluster of six towns (Agawam, Chicopee, Holyoke, Springfield, West Springfield, and Westfield) that accounted for 80% of the speed-related fatalities in the county. These six communities have major routes running through them including the Mass Pike, I-91, I-291, I-391 and Route 5. Overall, Hampden accounted for 13% of all reported speed-related fatalities from 2013-2017.

	Under 16	16-20	21-29	30-39	40-49	50-64	65+	Total
BARNSTABLE	0	3	8	4	0	5	0	20
BERKSHIRE	0	2	4	3	1	3	2	15
BRISTOL	0	8	16	17	2	5	6	54
DUKES	0	0	1	0	0	0	0	1
ESSEX	1	8	15	8	7	5	2	46
FRANKLIN	0	2	5	3	1	1	2	14
HAMPDEN	1	11	26	12	5	7	2	64
HAMPSHIRE	1	2	3	1	0	1	2	10
MIDDLESEX	1	10	14	8	8	4	5	50
NANTUCKET	0	0	0	0	0	0	0	0
NORFOLK	2	5	14	12	9	4	4	50
PLYMOUTH	1	11	23	5	4	6	4	54
SUFFOLK	3	5	10	6	5	2	0	31
WORCESTER	1	10	32	10	12	6	9	80
Total	11	77	171	89	54	49	38	

Table 13: Speed-related fatalities by County and Age, 2013-2017

Plymouth and Bristol County both had approximately 11% of all speed-related fatalities from 2013-2017. With two-thirds of its fatalities under the age of 30, OGR will redouble its efforts to create messaging that will resonate with younger drivers as well as work with law enforcement to improve focused overtime patrols that will better target that age group.

Those between the ages of 21-29 were the largest contingent for speed fatalities, representing 35% of all

deaths. More than half of all speed-related fatalities were under 30 years of age. In fact, nine of the 14 counties in Massachusetts attributed over 50% of their speed fatalities to those under 30 years of age.

Speed-related fatalities were most likely to occur along arterial roads, followed by local and then interstate roads. Arterials accounted for 46% of all speed fatalities from 2013-2017. Nearly a third of all interstate and freeway speeding fatalities took place in the early morning hours from 12 am to 2:59 am. Local roads saw a quarter of its fatalities between 9 pm and 11:59 pm.

	12am - 2:59am	3am - 5:59am	6am - 8:59am	9am - 11:59am	12pm - 2:59pm	3pm - 5:59pm	6pm - 8:59pm	9pm - 11:59pm	Total
Interstate	24	14	6	3	11	8	4	15	85
Freeways	6	3	1	1	1	2	4	1	19
Principal Arterial	19	9	11	3	7	11	23	21	104
Minor Arterial	27	11	9	5	8	14	22	21	117
Major Collector	5	4	2	2	3	3	10	4	33
Minor Collector	2	0	0	1	1	2	0	0	6
Local	19	11	7	3	9	16	20	29	114
Total	102	52	36	18	40	56	83	91	

Table 14: Speed-related fatalities by roadway type and time-of-day, 2013-2017

OGR will work with both State and local police to ensure enforcement patrols aimed at eliminating or stopping speeding would be conducted according to the results in Table 14, MSP should do the patrols in the

early morning hours while local police should focus on the hours from 6 pm to midnight.

Lastly, a look at speed-related fatalities by month. From 2013-2017, the average number of speed-related fatalities per month was 41. July, October, and November all have over 50 fatalities, which is more than 25% above average. The three-month period from September to November accounted for over a third of fatalities. More analysis would need to be done to determine why this period had high rates of fatalities over consecutive months.

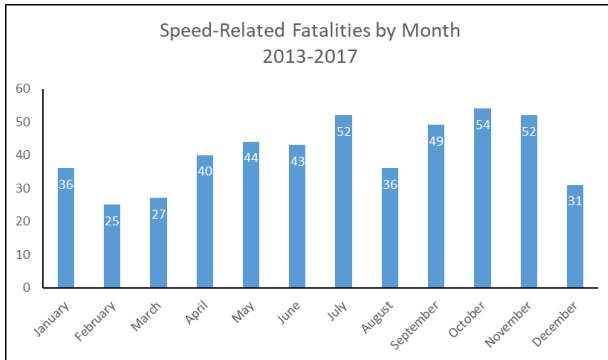


Figure 23: Speed-related fatalities by month, 2013-2017

Based on the data analysis provided in this section on speed-related fatalities, OGR will focus its efforts on messaging aimed at drivers under 30, especially males, in the metro areas of Boston, Springfield and Worcester as well as across the southeastern region. Any funded overtime enforcement by either State or local police should target the hours from 6 pm to 3 am with focus on three types of roadway – interstate, arterial, and local – and during the Friday through Sunday period.

Performance Measure for Program Area

C-6 Number of speeding-related fatalities

Planned Programming

SC-20-01 Speed Media

Develop and implement a statewide paid and earned media campaign in support of the March and June 2020 speed mobilizations. OGR will use state and national crash and fatality data to identify the target audience. Earned media funds will promote and augment the paid campaign while incorporating state laws and highlighting the work of state and local law enforcement agencies. Paid and earned media funds will also be used to direct messaging at teen drivers and their parents as part of the “100 Deadliest Days” from Memorial Day to Labor Day. OGR will contract with a marketing and advertising agency to execute this paid and earned media campaign while running social media in-house for sustained educational efforts.

Internal policies will be followed noting that all media communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data will be used not only for planning enforcement activities but also to determine the target audiences and media channels used to reach that audience. NHTSA’s guidelines will be followed for messaging, demographics, best practices and target groups for each media effort.

Projected Budget: \$ 150,000

Countermeasure Strategy Justification:

Communication Campaign

Speed safety media campaigns will support the speed and traffic enforcement mobilizations conducted by both State and local police during FFY 2020. Stopping drivers exceeding the posted speed limit or driving too fast for current conditions is a part of the overall objectives for high-visibility as well as sustained enforcement activities. Messaging will target a key demographic of males under age 30, which made up a majority of driver fatalities in a speed-related crash with focus on metro areas surrounding Boston, Worcester, and Springfield. Southeastern Massachusetts (Plymouth and Bristol County) was also be targeted for media messaging.

SC-20-02 MSP Speed Enforcement

Funds will be provided to the MSP to conduct speed-related enforcement activities aimed at decreasing the incidence of speeding violations and reducing the rate of speed-related motor vehicle crashes along the Commonwealth's major highways. In 2017, approximately 30% of all motor vehicle fatalities were related to speeding.

MSP will use internal data to determine the appropriate patrol schedule and deploy both marked and unmarked cruisers dedicated to addressing speed and aggressive driving violations as well as enforcing all other traffic safety laws. A speed enforcement mobilization is planned for June 11-28, 2020 and will run congruently with speed enforcement efforts conducted by local police departments participating in the Traffic Enforcement grant program. A supporting media campaign is planned to augment these enforcement efforts.

Projected Budget: \$ 250,000

Countermeasure Strategy Justification: *Sustained Enforcement*

Speed-related enforcement patrols will be conducted on a regular basis during FFY 2020 by MSP across the state with an emphasis on counties having high speed-related fatalities since 2013 such as Hampden and Worcester. Local police involved in STEP (Barnstable, Boston, Brockton, Cambridge, Chicopee, Fall River, Framingham, Holyoke, Lowell, Lynn, New Bedford, Quincy, Springfield, Taunton, Westfield, and Worcester) will also make speed enforcement among their patrol priorities along with impaired driving and occupant protection during overtime activity. With the inclusion of a speed enforcement mobilization campaign in FFY 2020, OGR is confident the impact of efforts by both MSP and local law enforcement will further help drive speed fatalities down.

SC-20-03 Local Police Speed Enforcement

Funds will be provided to the local police departments to conduct speed-related enforcement activities aimed at decreasing the incidences of speeding violations and reducing the rate of speed-related motor vehicle crashes, injuries, and fatalities across the Commonwealth. Two speed and aggressive driving high-visibility enforcement campaigns are planned - one to be conducted in March 2020 and one in June 2020.

The eligible subrecipients list will be determined on criteria such as overall crash rates, VMT, crashes per VMT, fatal crashes per VMT, and the percentage of fatal crashes related to speed.

Although not finalized, the number of eligible departments is estimated to be approximately 171.

Projected Budget: \$ 373,200

Countermeasure Strategy Justification: *High-Visibility Enforcement*

High-visibility enforcement campaigns have been shown in the past to be effective in helping deter speeding and aggressive driving. Based on data analysis, OGR will work with selected subrecipients to target high incidence periods of speeding and aggressive driving in Massachusetts. For example, enforcement patrols should be more frequent during the 6 pm to 3 am period, which accounted for nearly 60% of all speed-fatalities from 2013-2017. Through this data-driven targeted approach, high-visibility enforcement will lead to lower speeding and aggressive driving behavior in 2020 and beyond.

SC-20-04 Program Management – Speed & Aggressive Driving

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, postage, and office supplies.

Projected Budget: \$ 63,331

Countermeasure Strategy Justification: *OGR Program Management*

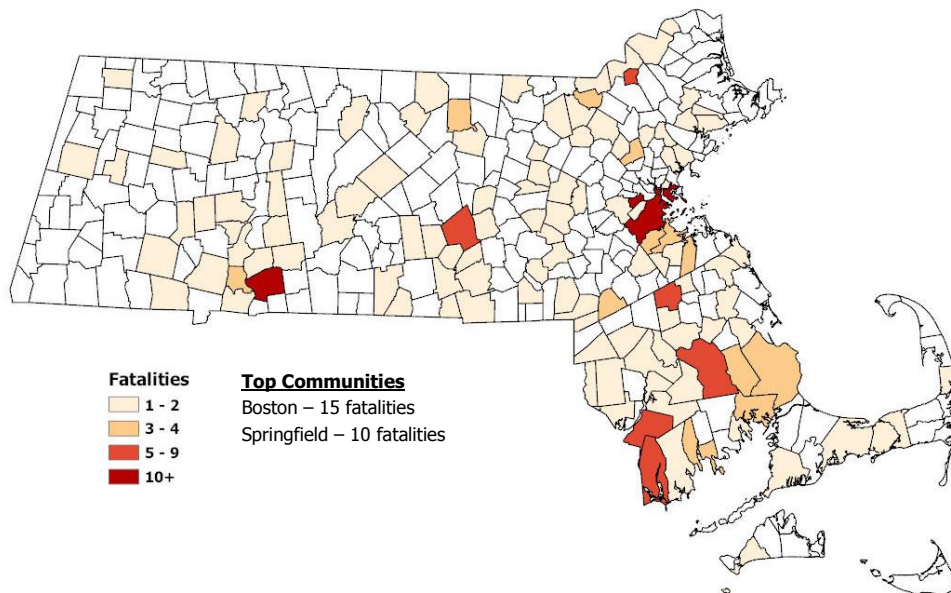
The day-to-day operation of OGR requires funding to allow staff to properly oversee the speed management program. Lack of oversight due to reduced or no funding could lead to increased speed-related fatalities on the roadways of Massachusetts.

Program Area: Motorcyclists Safety (MC)

Motorcycling continues to be a popular mode of transportation in Massachusetts. From 2013-2017, motorcyclists fatalities accounted for nearly 14% of all traffic fatalities reported in the Commonwealth. In 2017, 51 motorcyclists lost their lives on the roadways, up from 44 in 2016. At the same time, the number of registered motorcycles dropped 2% in 2017 to 165,148 from 168,000 in 2016. Unfortunately, with more fatalities and fewer registered motorcycles, the fatality rate for motorcyclists rose to 30.88 per 100,000 registered motorcycles – up 23% from the 25.03 rate reported in 2016. Nationally, the fatality rate per 100,000 was 58.90 in 2017.

NHTSA estimates helmets saved the lives of 1,859 motorcyclists in the US in 2016. (Note: NHTSA has not released 2017 estimates at this time.) If all motorcyclists had worn helmets, an additional 802 lives could have been saved. Helmets are estimated to be 37 percent effective in preventing fatal injuries to motorcycle operators, and 41 percent for passengers. In other words, for every 100 motorcycle riders killed in crashes while not wearing helmets, 37 of them could have been saved had they worn one. According to results from the 2017 National Occupant Protection Use Survey (NOPUS), the overall rate of DOT-compliant motorcycle helmet use in the United States was 65.2 percent. Helmet use was significantly higher in States that required all motorcyclists to be helmeted than states that did not (Traffic Safety Facts, August 2018, DOT HS 812 512). Massachusetts does require that motorcyclists be helmeted. Of the 51 reported motorcycle fatalities in 2017 in the Commonwealth, only one was determined to be not wearing a helmet at the time of the crash, down from three in 2016.

**Motorcycle Fatalities
2013-2017**



County	Total	Percent of All Motorcycle Fatalities
BARNSTABLE	6	3%
BERKSHIRE	3	1%
BRISTOL	30	13%
DUKES	1	0%
ESSEX	19	8%
FRANKLIN	4	2%
HAMPDEN	24	10%
HAMPSHIRE	11	5%
MIDDLESEX	28	12%
NANTUCKET	0	0%
NORFOLK	23	10%
PLYMOUTH	38	16%
SUFFOLK	18	8%
WORCESTER	35	15%
Total	240	

Table 15: Motorcycle Fatalities by County, 2013-2017

In 2017, motorcycle fatalities accounted for 14.7% of all motor vehicle-related fatalities in Massachusetts, up from 11.4% in 2016. Males represented 94% (225 of 240) the motorcycle fatalities, up from 86% in 2016. From 2013-2017, there have been 240 motorcycle fatalities across the Commonwealth with Plymouth (16%) as the leading county. The southeastern region – Plymouth and Bristol combined – accounted for nearly a third of all motorcycle fatalities. One-fifth of motorcycle fatalities took place across five communities: Boston (15), Springfield (10), Worcester (8), Middleborough (7), and Brockton (6).

From 2013 to 2017, motorcycle fatalities involving another motor vehicle (107 crashes) accounted for 45.7% of all fatal crashes. This is slightly lower than the 46.1%

(112 crashes) reported from 2012 to 2016. Norfolk County had the highest percentage of motorcycle fatalities involving a collision with a motor vehicle with 15.9% of the 107 crashes

County	Motorcycle Fatalities in Collision w/MV (2013-2017)	Percent of All MV-involved Fatalities
BARNSTABLE	3	2.8%
BERKSHIRE	2	1.9%
BRISTOL	15	14.0%
DUKES	1	0.9%
ESSEX	8	7.5%
FRANKLIN	2	1.9%
HAMPDEN	13	12.1%
HAMPSHIRE	4	3.7%
MIDDLESEX	9	8.4%
NANTUCKET	0	0.0%
NORFOLK	17	15.9%
PLYMOUTH	12	11.2%
SUFFOLK	6	5.6%
WORCESTER	15	14.0%
Total	107	

Table 16: Motorcycle Fatalities involving a Collision with a Motor Vehicle, 2013-2017

Of the reported 107 motorcycle fatalities involving collisions with other motor vehicles, the most prevalent type of collision was at an angle. This occurred in 55% of the fatalities, followed by front-to-front (or head-on) with 22% and front-to-rear at 17%. In all, these three types of collisions accounted for 94% of all motorcycle fatal crashes involving another motor vehicle.

By roadway type, motorcycle fatalities involving another motor vehicle occurred most frequently along minor arterial roads (33%), principal arterials (30%), and local roads (25%). One likely reason for the high numbers along both principal and minor arterial roads is the amount of distractions (signs, traffic signals, motor vehicles turning in and out, pedestrians and bicyclists crossing roads) that could result in a driver of either a motor vehicle or motorcycle to not pay enough attention to other vehicles sharing the road with them.

Roadway Type	Angle	Front-to-Front	Front-to-Rear	Total
Interstate	0	1	4	5
Principal Arterial - Other Freeways And Expressways	1	0	0	1
Principal Arterial - Other	21	4	5	30
Minor Arterial	17	9	7	33
Major Collector	2	3	0	5
Minor Collector	0	2	0	2
Local	18	5	2	25
Total	59	24	18	101

Table 17: Motorcycle fatalities involving a collision with a motor vehicle by roadway type, 2013-2017

Further analysis regarding the high incidence of angle collisions along arterial and local roads would be needed to determine if roadway design flaws may be attributing to these fatalities.

Month	All MC Fatalities	MC Fatalities w/Speeding
January	0	0
February	2	1
March	4	0
April	16	7
May	26	13
June	32	9
July	46	20
August	40	13
September	29	13
October	26	10
November	16	5
December	3	0
Total	240	91

Table 18: Motorcycle Fatalities by Month, 2013-2017

Given that motorcycling exposes its riders to the elements, it is not surprising that motorcycle fatalities occur more frequently during warmer months. The months from May through October account for 83% of all motorcycle fatalities. During the same period, speed was a factor in 78 of the 199 reported fatalities. Overall, speeding was involved in 38% of motorcycle fatalities from 2013 to 2017. This is the same rate for speed-related motorcycle fatalities from 2012 to 2016. OGR plans to integrate speed-related safety messaging into its FFY 2020 motorcycle safety campaign, as done in previous years, which will take place during the spring/summer of 2021.

Age Range	MC Fatalities 2013-2017	MC Fatalities w/Speeding
Under 21	16	6
21-24	49	25
25-29	41	23
30-34	25	14
35-44	36	12
45-54	33	9
55-64	29	1
65-74	10	1
75+	1	0

Table 19: Motorcycle Fatalities by Age, 2013-2017

The dexterity and hand-eye coordination required for operating a motorcycle tends to favor younger operators as one's reflexes and reaction times diminish over time. From 2013 to 2017, motorcycle fatalities involving speeding was skewed towards the younger crowd. Those under 30 years of age accounted for 54% of all speed-related motorcycle fatalities.

As mentioned in the overview of fatalities in Massachusetts in Section I, 35% of traffic fatalities during 2013-2017 took place on the weekend (Saturday/Sunday) and 47% of fatalities occurred between the hours of 3 pm and 11:59 pm. Motorcycle fatalities, in comparison, were even higher on the weekend (39% of all motorcycle fatalities) and also between 3 pm to 11:59 pm (58% of all motorcycle fatalities). One possible reason for the increase compared to overall fatalities is that motorcycle enthusiasts may be more likely to be on the road

recreationally, riding after work hours and during the weekend, rather than utilizing their motorcycles for commuting purposes. The typical morning rush hours only accounted for 4.6% of all motorcycle fatalities.

Table 20: Motorcycle Fatalities by Time and Day-of-Week, 2013-2017

	Sunday	Monday	Tuesday	Weds	Thursday	Friday	Saturday	Total
12am - 2:59am	6	2	0	3	2	5	7	25
3am - 5:59am	2	0	0	0	2	2	1	7
6am - 8:59am	1	2	2	2	1	1	2	11
9am - 11:59am	3	1	3	0	3	2	2	14
12pm - 2:59pm	8	3	8	5	3	1	8	36
3pm - 5:59pm	8	9	2	5	5	3	5	37
6pm - 8:59pm	10	6	8	5	9	9	14	61
9pm - 11:59pm	7	3	3	9	7	4	9	42
Total	45	26	26	29	32	27	48	240

Motorcycle riders were found with a BAC .08 or higher in 30% of motorcyclist fatalities from 2013-2017. Those under 30 years of age accounted for 40% of these alcohol-impaired fatalities. Drugs in the system among motorcyclist fatalities were more prevalent than alcohol during the same time frame. Of the 240 motorcycle fatalities reported, 51% were determined to have been under influence of one or more drugs at the time of the crash, with 42% of these fatalities being under the age of 30.

County	MC Fatality w/BAC .08+	BAC .08+ & Under 30	MC Fatality w/Drugs	Drugs & Under 30
BARNSTABLE	2	1	3	1
BERKSHIRE	0	0	1	0
BRISTOL	5	1	14	7
DUKES	0	0	0	0
ESSEX	3	0	7	3
FRANKLIN	0	0	1	0
HAMPDEN	10	3	18	6
HAMPSHIRE	3	0	6	1
MIDDLESEX	10	9	15	10
NANTUCKET	0	0	0	0
NORFOLK	5	3	12	5
PLYMOUTH	15	7	20	9
SUFFOLK	4	0	7	3
WORCESTER	16	5	18	6
Total	73	29	122	51

Table 21: Impaired motorcyclist fatalities by county, 2013-2017

The level of drug use among motorcyclists is concerning, especially in Hampden County, where 18 of the 24 fatalities reported involved drugs. For FFY 2020, OGR may look to increase impaired driving messaging among motorcyclist under 30 years of age within Hampden as well as Middlesex, Plymouth, Worcester, and Bristol.

In conclusion, OGR plans to tackle motorcyclist safety and decrease motorcyclist fatalities in FFY 2020 through the operation of two planned activities – Motorcycle Media and Motorcycle Safety Program Enhancements. Described in the section below, these two planned programs will focus on outreach and messaging to regions of the state that have high incidence of motorcyclist fatalities such as southeastern Massachusetts (Bristol and

Plymouth counties) as well as work with law enforcement to better focus patrols along arterials and local roads during weekend and during the hours of 3pm to 11:59pm to have a presence when motorcyclists are more predominant.

Performance Measure for Program Area

C-7 Number of motorcyclist fatalities

C-8 Number of unhelmeted motorcyclist fatalities

Planned Programming

MC-20-01 Motorcycle Safety Media

Develop and implement a media program will also educate motorcyclists about the importance of rider safety and the dangers of impaired riding. A combination of earned and paid media will focus on the risks of speeding and the enforcement of impaired riding laws through public service announcements, social media, and press outreach. The media campaign will run in the time frame of May-September and will target males, with a skew towards males under 30 years of age. Local and national data will

be used to identify the timing and target audience of the campaign. OGR will contract with a media vendor to assist with the development and targeted distribution of motorcycle safety information to key demographics and regions in Massachusetts.

Internal policies will be followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular enforcement. Crash and citation data will be used not only for planning enforcement activities but also to determine the target audiences and media channels used to reach that audience. NHTSA's guidelines will be followed for messaging, demographics, best practices and target groups for each media effort.

Projected Budget: \$ 100,000

Countermeasure Strategy Justification:

Communication Campaign

In 2017, motorcycle fatalities accounted for 14.7% of all motor vehicle-related fatalities in Massachusetts, up from 11.4% in 2016. This increase is due in part to the year-to-year drop in overall motor vehicle fatalities from 387 to 347 in 2017 as well as the 16% rise in motorcycle fatalities from 2016 to 2017. OGR will partner with RMV's Motorcycle Rider Education Program (MREP) to develop and promote an awareness campaign about motorcycle safety. The media for the campaign – online, radio, television, and/or outdoor billboards and electronic signs, will take place during the warmer months (May to October) to take advantage of the peak riding season in Massachusetts. It is this period of the year when over 80% of motorcyclist fatalities occur.

Not only will the media campaign be in full force during warmer months when motorcyclists are more likely to be on the roads, any associated media buy(s) will skew towards Bristol, Hampden, Norfolk, Plymouth, and Worcester counties. These counties represent 67% of the motorcycle crashes involving another motor vehicle from 2013 to 2017.

Emphasis on younger motorcyclist (under 30 years of age) and speeding will also be incorporated into the media messaging. Those under 30 years of age accounted for 44% (106 of 240) of motorcyclist fatalities from 2013-2017 and even more concerning is the fact that speeding was a factor in nearly 60% of those deaths.

MC-20-02 Motorcycle Safety Program Enhancements

The RMV Motorcycle Rider Education Program (MREP) will contract with the Motorcycle Safety Foundation (MSF) to hire a full-time RiderCoach Trainer. Half of this cost will come from Section 405-f funding, one quarter from MREP's state funding, and one quarter from MSF. This will give MREP personnel a single source of training information, including the three MA RiderCoach Trainers who will assist this Lead MSF RiderCoach Trainer. These RiderCoach Trainers will conduct quality assurance visits and curriculum updates with existing instructors as well as training new instructors. RMV will improve the Basic Rider Course by incorporating state motorcycle safety data to enhance its curriculum. RMV will evaluate the MSF Skill Evaluation offered at the end of the Basic Rider Course to determine if it needs enhancement and can continue to serve as a substitute for the RMV's state motorcycle license test. MSF recently developed a Basic Rider Course - 3-Wheel Seat and Steering Wheel course. RMV will review if this course can serve as a training opportunity and license test substitute for the auto cycle type vehicles in Massachusetts which are considered motorcycles.

OGR will develop paid media in coordination with the RMV's Motorcycle Rider Education Program (MREP) to enhance driver awareness of motorcyclists and educate motor vehicle operators about the need to share the road. The awareness campaign will run in late spring-summer, the time of year when motorcyclist fatalities spike. Any associated media buy(s) will skew towards areas that represent significant motorcycle crashes involving other motor vehicles between 2008-2017.

Massachusetts has 12 motorcycle schools that provide training opportunities at 26 sites, encompassing 11 of 14 counties across the state. Based on 2017 data from RMV, Massachusetts has 165,148 registered motorcycles. The number of registered motorcycles for a county is in parentheses after the county name below.

Barnstable (6,704) – West Dennis

Berkshire (5,099) – Pittsfield

Bristol (18,349) – South Easton, Dartmouth, Raynham, Seekonk
Essex (18,865) – Beverly, North Andover
Franklin (3,212) – Ashfield, Greenfield
Hampden (12,144) – Palmer, Westfield (2)
Middlesex (32,037) – Ayer, Bedford, Framingham, Tyngsborough
Norfolk (12,843) – Foxborough, Norwood
Plymouth (15,562) – Brockton, Plympton, Wareham
Suffolk (6,859) – Revere
Worcester (27,649) – Auburn, Sturbridge, West Boylston

Dukes, Hampshire, and Nantucket counties have 907, 4256, and 568 registered motorcycles, respectively. At this time, no motorcycle schools are planned in these counties.

Projected Budget: \$ 100,000

Countermeasure Strategy Justification:

Motorcycle Rider Training

Data has shown that motorcycle rider training does help improve motorcycle safety and reduces the likelihood of fatal crashes among those who complete the training. In FFY 2020, OGR will work with the RMV to help improve its Motorcycle Rider Education Program (MREP) through enhancements in the delivery of motorcycle training in urban and rural areas as well as increase the number of certified motorcycle training instructors.

Forty-four percent of all motorcyclist fatalities in the last five years (2013-2017) has been among motorcycle riders under the age of 30 and OGR will work with RMV to target this age demographic in order to increase their participation in MREP training sessions.

MC-20-03 Program Management – Motorcycle Safety

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, postage, and office supplies.

Projected Budget: \$ 30,000.00

Countermeasure Strategy Justification:

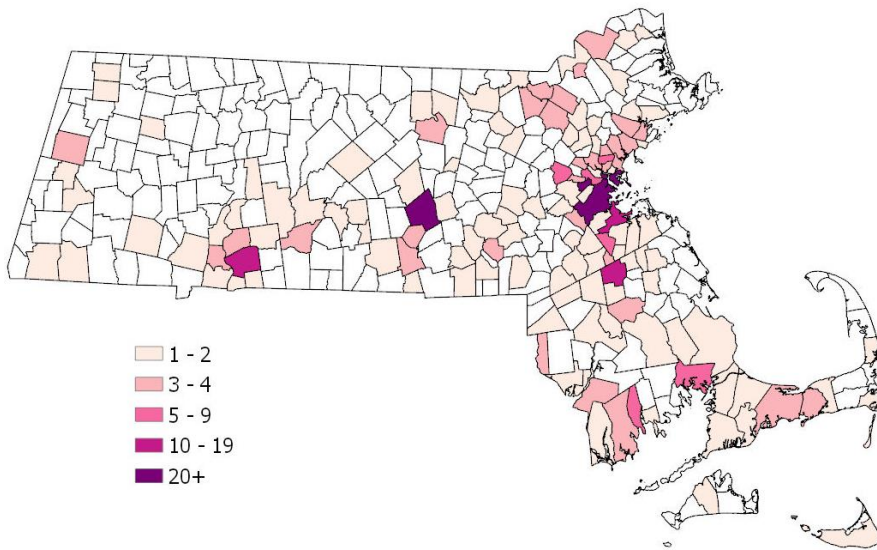
OGR Program Management

The day-to-day operation of OGR requires funding to allow staff to properly oversee the speed management program. Lack of oversight due to reduced or no funding could lead to increased speed-related fatalities on the roadways of Massachusetts.

Program Area: Pedestrian and Bicyclist Safety (PS)

From 2013 to 2017, pedestrian fatalities in the U.S. increased by 25%. In that same period in Massachusetts, pedestrian fatalities have declined by 6%. Nationally in 2017, pedestrian fatalities accounted for 16% of all traffic deaths; in Massachusetts, that number was 21%. In 2017 males accounted for 70% of all pedestrian fatalities in the US. In Massachusetts 61% of those pedestrians killed were male.

**Pedestrian Fatalities
2013-2017**



Pedestrian fatalities from 2013 to 2017 were far more frequent in communities with high population density – Boston (54 fatalities), Brockton (13), Quincy (11), Springfield (17), and Worcester (24). Together these five cities accounted for 30% of all Massachusetts pedestrian fatalities.

Of the 384 pedestrian fatalities reported, 63% of occurred in eastern Massachusetts. Barnstable, Bristol, Essex, Middlesex, Norfolk, Plymouth, and Suffolk saw 242 pedestrian deaths. Central and Western Massachusetts (Berkshire, Hampden, Hampshire, and Worcester County) accounted for 107 deaths or 28%.

County	Pedestrian Fatalities
Barnstable	17
Berkshire	9
Bristol	28
Dukes	1
Essex	33
Franklin	0
Hampden	36
Hampshire	8
Middlesex	66
Nantucket	1
Norfolk	38
Plymouth	34
Suffolk	59
Worcester	54

Table 22: Pedestrian Fatalities by County, 2013-2017

In Table 22, a breakdown of pedestrian fatalities by time and day of the week is provided. The hours between 3 pm and 11:59 pm is the most dangerous for pedestrians on the roadways. Nearly 60% of pedestrian fatalities occurred during this time from 2013-2017. The three hour period from 6 pm to 8:59 pm was the only time frame with double-digit fatalities for every day of the week. This would coincide with the weekday rush hour home and on the weekend with the popular period of time for people to head out to local establishments.

Wednesday experienced the highest number of pedestrian fatalities with 67, 17% of all pedestrian deaths. Nearly two-thirds of Wednesday's fatalities took place between 12 pm and 8:59 pm.

	12am - 2:59am	3am - 5:59am	6am - 8:59am	9am - 11:59am	12pm - 2:59pm	3pm - 5:59pm	6pm - 8:59pm	9pm - 11:59pm	Hour Unknown	Total
Sunday	3	6	3	2	4	8	13	10	3	52
Monday	1	4	6	7	4	9	11	6	0	48
Tuesday	7	1	9	1	5	5	15	7	3	53
Wednesday	2	4	6	3	11	17	14	6	4	67
Thursday	2	3	6	5	3	8	13	11	3	54
Friday	3	3	3	2	3	7	13	16	0	50
Saturday	7	3	3	3	4	6	16	17	1	60
Total	25	24	36	23	34	60	95	73	14	

Table 23: Pedestrian Fatalities by Day and Time Frame, 2013-2017

Ages of the deceased pedestrians are skewed more to those over 50 years old. Pedestrians under 30 years of age accounted for 21% of the fatalities, while those age 50 or higher represented nearly 60% of the fatalities.

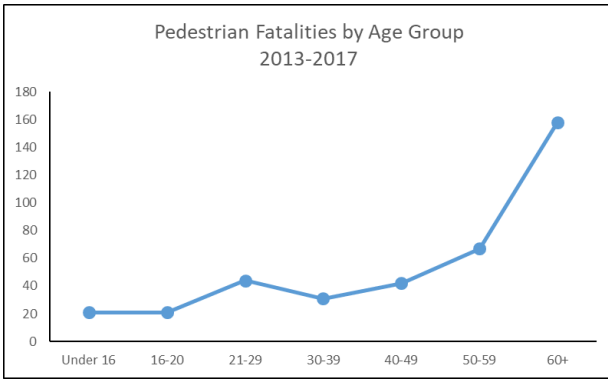


Figure 24: Pedestrian Fatalities by Age Group, 2013-2017

Of great concern is the recent jump in fatalities for those age 60 or older. This age group had 158 reported fatalities or 41% of all pedestrian fatalities from 2013-2017.

Why the high incidence of older pedestrian fatalities? A look at the location of the pedestrian at the time of crash provides a possible clue. Table 24 shows the breakdown of pedestrian location by age grouping for the locations that accounted for 90% of all pedestrian fatality locations.

Table 24: Pedestrian Location at Time of Crash, 2013-2017

Location of Pedestrian at Time of Crash	Under 16	16-20	21-29	30-39	40-49	50-59	60+
Not At Intersection - On Roadway, Not In Marked Crosswalk	12	13	27	21	29	39	64
At Intersection - In Marked Crosswalk	1	3	1	2	5	5	39
At Intersection - Not In Crosswalk	0	1	3	1	1	6	12
Not At Intersection - In Marked Crosswalk	0	0	0	0	1	3	12
Not At Intersection - On Roadway, Crosswalk Availability Unknown	2	0	2	2	1	2	7
Shoulder/Roadside	2	3	2	4	0	3	2
Sidewalk	1	0	3	1	1	2	5

For those 60 years of age or older, over a third of the locations were in a marked crosswalk. This is dramatically higher than any other age group. In comparison, pedestrians under 30 years of age had only 10% of fatalities in a marked crosswalk. Those 50-59 experienced 13% of fatalities in marked crosswalks. Possible factors for those age 60 or older is the inability to quickly move, and poor hearing or eyesight impairs judging distance of moving vehicles. Older pedestrians are additionally less able to recover from serious injuries as well.

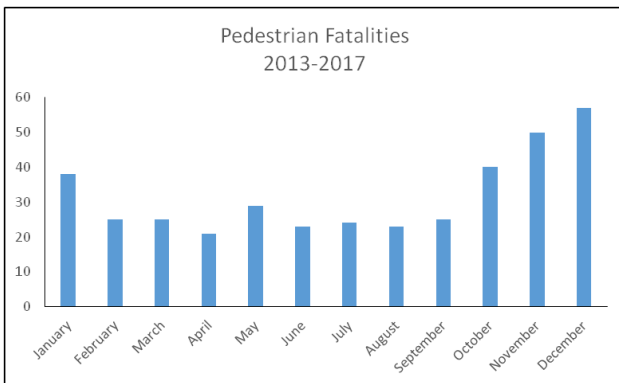


Figure 25: Pedestrian Fatalities by Month, 2013-2017

An assessment of the time of year shows that fatalities occur more frequently from October to January. The lack of daylight, especially around the evening commuting hours (3 pm to 6 pm), is a factor that could impact drivers' ability to see pedestrians. Data does reveal dark clothing as the top pedestrian contributing factor with 62 fatalities (16% of all pedestrian deaths) noting this as a factor.

For FFY 2020, OGR plans to continue its programming aimed at pedestrian safety in an effort to continue to reduce the number of

pedestrian fatalities. The high pedestrian fatality count in the urban communities of Boston, Worcester, Springfield, Brockton, and Quincy will be addressed through the funding of pedestrian-focused grant programming as well as sustained enforcement. More analysis is needed to determine the best strategy to counter the high rate of fatalities among pedestrian age 60 or older. OGR share key data points with local law enforcement to better target periods of expected increases in pedestrian fatalities such as conducting patrols more often during late fall/early winter and around the hours of 3 pm to midnight.

In 2017, there were 11 bicyclist fatalities reported in Massachusetts, up from 10 in 2016. Bicyclist fatalities accounted for 3% of all traffic fatalities, higher than the national rate of 2%. Middlesex County led Massachusetts with 21% of the all bicyclist fatalities from 2013-2017. Suffolk County had eight bicyclist fatalities in the same period. Together, these top two counties accounted for over a third of all bicyclist fatalities.

County	Bicyclists Fatalities
Barnstable	4
Berkshire	1
Bristol	4
Dukes	0
Essex	2
Franklin	2
Hampden	5
Hampshire	2
Middlesex	10
Nantucket	0
Norfolk	2
Plymouth	5
Suffolk	8
Worcester	2

Table 25: Bicyclists Fatalities by County, 2013-2017

Boston, with its high bicyclist population and heavy traffic, led all communities with six fatalities. In all, 34 towns and cities across Massachusetts reported at least one bicyclist fatality between 2013 and 2017.

Males are disproportionately represented with over 80% of all bicyclist fatalities. Of the 38 male fatalities, eight were found to not be wearing a helmet at the time of the crash. For females, three of the nine fatalities were without a helmet at the time of impact.

Bicyclist fatalities were not limited to the young. In fact, riders 50 years or older accounted for 53% of fatalities. With regards to helmet use, of the 11 reported bicyclist fatalities without a helmet, over half were age 50 or older.

	Male	Female	Total
Under 16	4	1	5
16-20	4	0	4
21-29	5	2	7
30-39	2	2	4
40-49	2	0	2
50-59	10	2	12
60+	11	2	13
Total	38	9	

Table 26: Bicyclist Fatalities by Age & Gender, 2013-2017

While much of the media messaging about bicycle helmet usage has been understandably focused on children and teenagers, some outreach toward older adults is worth pursuing given the high percentage of older adults not wearing a helmet in a bicyclist crash.

Town	Bicyclists Fatalities
BOSTON	7
BROCKTON	3
CAMBRIDGE	3
LINCOLN	2
SPRINGFIELD	2
WESTFIELD	2
AMHERST	1
ATTLEBORO	1
BARNSTABLE	1
BEVERLY	1
BREWSTER	1
CHARLTON	1
CHELSEA	1
DARTMOUTH	1
DEERFIELD	1
EASTHAM	1
FITCHBURG	1
GREENFIELD	1
HOLYOKE	1
HUDSON	1
HULL	1
LITTLETON	1
MALDEN	1
MANSFIELD	1
MEDFORD	1
METHUEN	1
MIDDLEBORO	1
NORTHAMPTON	1
PITTSFIELD	1
SUDBURY	1
TAUNTON	1
WELLFLEET	1
WESTWOOD	1
WRENTHAM	1

Table 27: Top Towns for Bicyclists Fatalities, 2013-2017

Over a third of bicyclist fatalities took place between 3 pm and 6 pm. This is the time when kids are heading home from school and people are leaving work. Nearly 70% of bicyclist fatalities occurred from 12 pm to 9 pm.

	12am - 2:59am	3am - 5:59am	6am - 8:59am	9am - 11:59am	12pm - 2:59pm	3pm - 5:59pm	6pm - 8:59pm	9pm - 11:59pm	Hour Unknown	Total
Sunday	0	1	0	2	1	4	0	1	0	9
Monday	0	0	0	0	0	3	0	0	0	3
Tuesday	0	0	0	0	1	2	1	1	0	5
Wednesday	0	1	1	0	3	1	1	0	0	7
Thursday	0	0	0	0	2	1	2	1	1	7
Friday	1	0	1	2	2	2	3	0	0	11
Saturday	0	1	0	0	1	1	0	2	0	5
Total	1	3	2	4	10	14	7	5	1	

Table 28: Bicyclists Fatalities by Day & Time Frame, 2013-2017

From 2013-2017, bicyclists fatalities occurred with most frequency on Sunday and Friday. These two days accounted for over half of fatalities. Friday saw 7 of its 11 fatalities taking place between 12 pm and 8:59 pm; Sunday had 7 of its 9 happening between 9 am and 5:59 pm.

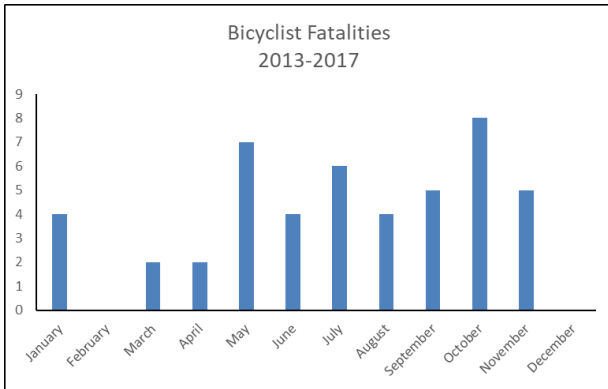


Figure 26: Bicyclist Fatalities by Month, 2013-2017

Bicyclist fatalities occurred more often during warmer months, May to October. The three highest months for fatalities were October, May, and July respectively. May is usually the final month of the college term in the Boston area as well as the first month of consistently warm weather. October is still warm enough for students as well as urban commuters to ride bikes to get to and from class or work. July is typically the height of summer vacation for students (elementary through college).

With no fatalities reported in either February or December, having four fatalities in January was unexpected. Biking is not a popular mode of transportation during winter months in New England, especially with icy and snowy roads to contend with. Data shows that three of the four fatalities were over 50 years of age.

For FFY 2020, OGR will look to target bicycle safety programming and outreach, particularly in Suffolk and Middlesex Counties. Law enforcement patrols that take place primarily between 3 pm and 9 pm on Mondays and Wednesdays will be encouraged.

Performance Measure for Program Area

C-10 Number of pedestrian fatalities

C-11 Number of bicyclists fatalities

Planned Programming

PS-20-01 Pedestrian and Bicyclist Safety Media

Develop and implement a pedestrian and bicyclist safety paid and earned media campaign in conjunction with the MassDOT's Traffic Safety Division, which will encourage all road users to safely share the road, educate the public on related traffic laws, and promote the enforcement efforts of local police departments. OGR will analyze local and national crash and fatality data to identify the timing and target audience. OGR will contract with a marketing and advertising agency to execute the media campaign. Social media will be used for sustained educational efforts.

Internal policies will be followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data will be used not only for planning enforcement activities but also to determine the target audiences and media channels used to reach that audience. NHTSA's guidelines will be followed for messaging, demographics, best practices and target groups for each media effort.

Projected Budget: \$150,000

Countermeasure Strategy Justification:*Communication Campaign*

In 2017, pedestrian fatalities dropped to 74 from 78 in 2016. To build upon this positive trend, OGR plans to launch a paid and earned media campaign during FFY 2020 to raise awareness among drivers, pedestrians, and bicyclists of the need to share the roadways responsibly. This campaign will use both online and offline (radio, television, electronic signs) media to spread the message and will be done concurrently with local police overtime enforcement activity. OGR will suggest any pedestrian and/or bicyclist-focused patrols to be conducted between 9 am and 9 pm with emphasis on Fridays and Sundays.

PS-20-02 Local Police Pedestrian & Bicyclist Safety Enforcement Program

Award grants to municipal police departments to conduct enforcement activities aimed at reducing the incidence of pedestrian and bicyclist injuries and fatalities. Enforcement patrols will take place throughout the year, with departments utilizing crash data and trends to select timing and locations of enforcement activities. The purchase of safety items and educational materials will be allowed, pending problem identification and a plan for public distribution. Safety items will include bicycle helmets, lights, reflectors, and other items to enhance pedestrian and bicyclist conspicuity at night.

Projected Budget: \$700,000

Countermeasure Strategy Justification:*Pedestrian Safety Zones*

Pedestrian safety zones concept is aimed at more effectively targeting resources to problem areas by focusing on enforcement, education, and interventions on key geographic areas of a community. For example, data analysis of crash locations involving pedestrians in a town might find a cluster within range of a public school. To counter the problem, the local police department would target the area by making presentations at the school, conducting enforcement patrols on the main streets near or by the school, and displaying public safety messaging (billboards, banners, and electronic signs) in the same area. Studies have shown this approach leads to decreased fatalities, especially among pedestrians and bicyclists.

The planned activity, Local Pedestrian and Bicyclist Enforcement, will utilize this approach with subrecipients in order to target regions or areas of high incidences involving motor vehicles, pedestrians, and/or bicyclists.

PS-20-03 Community-Based Pedestrian and Bicyclist Safety Program

Competitive grant awards will be provided to one or more organizations such as Girl Scouts, Boy Scouts, PTOs, schools, faith-based and advocacy groups, etc., that will implement community-based programs. The eligible applicants may include both non-profit 501(c)(3) or governmental agencies.

This planned activity will consist of one or more data-driven competitive grant programs that will be focused in geographical areas and/or high-risk populations that have demonstrated need in the area of pedestrian and bicyclist safety.

The programs will generally be focused on raising awareness of road safety, training, and changing social attitudes and behaviors in order to reduce vehicle crashes and their associated fatalities, serious injuries and economic losses on the state's roadways.

This will not be a traffic enforcement program, but OGR will encourage applicants to develop new or enhance existing partnerships with law enforcement agencies to achieve project goals.

Selected grant subrecipients will develop and implement traffic safety improvement educational and awareness programs that address issues in their targeted communities. Programs that focus on high-risk groups or behaviors will be prioritized. Organizations will be encouraged to build partnerships that incorporate a whole-community, data-driven approach to

identifying and addressing road safety problems. The formation of community-wide road safety coalitions that bring together a wide constituency to focus on aspects of road safety will also be encouraged.

Projects that will develop and implement an educational curriculum that aims to install a life-long road safety culture in the Commonwealth's citizenry will also be prioritized. Projects may also incorporate social, and/or traditional media strategies to change risky behavior on the state's roadways.

The competitive grant solicitation may guide potential applicants to various informational resources such as:

- National Highway Traffic Safety Administration
- Centers for Disease Control and Prevention
- Governors Highway Safety Association
- Insurance Institute for Highway Safety
- National Safety Council
- American Automobile Association
- The Vision Zero Network
- Mothers Against Drunk Driving
- Students Against Destructive Decisions

Projected Budget: \$25,000.00

Countermeasure Strategy Justification: *Communication Campaign*

This planned activity will fund one or more local community organizations to develop and implement awareness and education initiatives that will promote OGR's pedestrian and bicyclist safety messaging. The ultimate goal of the planned activity is to lower pedestrian and bicyclist fatalities within the community or communities being funded.

PS-20-04 Program Management – Pedestrian and Bicyclists Safety Program

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, postage, and office supplies.

Projected Budget: \$77,102

Countermeasure Strategy Justification: *OGR Program Management*

The day-to-day operation of OGR requires funding to allow staff to properly oversee the pedestrian and bicyclist safety program. Lack of oversight due to reduced or no funding could lead to increased speed-related fatalities on the roadways of Massachusetts.

Program Area: Distracted Driving (DD)

Distracted driving occurs when a driver fails to pay full attention to the task of driving and instead diverts his/her attention from the roadway. While this includes traditional distractions such as talking to passengers, eating, and adjusting radio controls, the use of hand-held and built-in electronic devices such as phones, tablets, infotainment systems, laptop computers, and GPS has quickly added significant major risks to the safety and health of all road users. Compounding this problem is the continued exponential growth and use of smartphone apps.

An additional issue related to distracted driving is that data may reflect an under-reporting of the problem. Unless a driver, passenger, or witness to the crash confirms the distracted behavior, law enforcement must get access to cell phone records to confirm any usage at the point of impact or just before a crash occurred, and that does not always happen.

In 2017, nine percent of all fatal crashes in the U.S. were reported as 'distraction-affected' (*Traffic Safety Facts - Distracted Driving 2017*, DOT HS 812 700, April 2019) involving one or more of the following distractions: an occupant; a moving object in the vehicle, talking on a cell phone; manipulating a cell phone; adjusting audio, climate or other controls in vehicle; reaching for a device or object; an outside person, object, or event; eating or drinking; smoking; daydreaming; and general distraction/carelessness.

Of the 2,994 drivers killed in a distraction-affected fatal crash in the United States in 2017, 36% (1,087 drivers) were under 30 years of age. This under 30 age group was found to be using a cell phone in 20% of fatal crashes (214 of 1,087). In Massachusetts, there were 22 documented 'distraction-affected' fatal crashes in 2017, six percent of all fatal crashes. These crashes resulted in 24 fatalities or 7% of all fatalities. The percentage of drivers under age 30 involved in a distracted driving crash was 32% (7 of 22) in 2017, lower than the national rate of 36%.

From 2013 to 2017, Massachusetts had 2,325 drivers involved in fatal crashes. Of these crashes, 146 drivers were documented as a 'distraction-affected' and there were 149 fatalities. Fifty-three drivers, or 36%, of the 146 drivers perished in a crash.

"Driver Distracted by" Element	Gender		Total
	Male	Female	
By Other Occupant	3	2	5
By A Moving Object In Vehicle	0	0	0
While Talking Or Listening To Cellular Phone	2	5	7
While Manipulating Cellular Phone	4	1	5
Adjusting Audio Or Climate Controls	2	0	2
While Using Other Component/Controls Integral To Vehicle	0	0	0
While Using Or Reaching For Device/Object Brought Into Vehicle	0	1	1
Distracted By Outside Person, Object Or Event	10	3	13
Eating Or Drinking	7	1	8
Smoking Related	0	0	0
Other Cellular Phone Related	2	1	3
Distraction/Inattention	31	15	46
Distraction/Careless	3	0	3
Careless/Inattentive	13	3	16
Distraction (Distracted), Details Unknown	0	1	1
Inattention (Inattentive), Details Unknown	22	14	36
Lost In Thought / Day Dreaming	0	0	0
Total	99	47	146

Table 29 shows how much males dominate nearly every type of distraction compared to females. Sixty-eight percent of distracted drivers were male. This is not too surprising given that male drivers account for over 70% of all drivers in crashes from 2013-2017.

Table 29: Driver Distraction by Gender, 2013-2017

10% of all distraction-affected fatal crashes from 2013-2017 were cellphone-related. The elements of 'distraction/inattention' and 'inattention (inattentive)' were cited in over half the drivers involved in a crash. Outside the vehicle or external distractions were cited in 9% of crashes with males accounting for 10 of the 13 drivers involved.

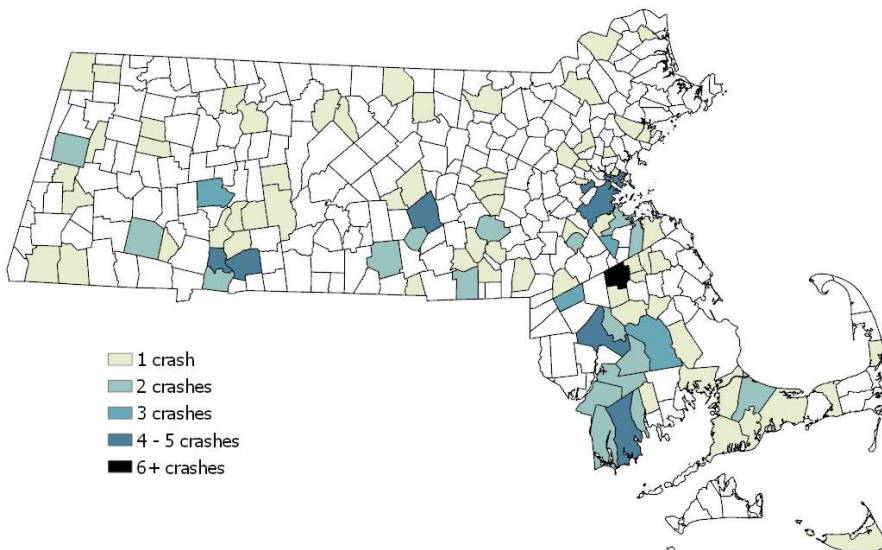
"Driver Distracted by" Element	16-20	21-29	30-39	40-49	50-59	60+	Total
By Other Occupant	0	1	2	1	1	0	5
While Talking Or Listening To Cellular Phone	1	4	1	1	0	0	7
While Manipulating Cellular Phone	1	2	0	0	1	1	5
Adjusting Audio Or Climate Controls	0	1	1	0	0	0	2
While Using or Reaching for Device/Object	0	0	0	0	1	0	1
Distracted By Outside Person, Object Or Event	4	1	5	1	1	1	13
Eating Or Drinking	1	3	1	0	0	3	8
Other Cellular Phone Related	1	0	0	1	1	0	3
Distraction/Inattention	9	5	4	6	7	15	46
Distraction/Careless	1	2	0	0	0	0	3
Careless/Inattentive	3	6	1	1	2	3	16
Distraction (Distracted), Details Unknown	0	0	1	0	0	0	1
Inattention (Inattentive), Details Unknown	3	6	7	1	7	12	36
Total	24	31	23	12	20	35	

Table 30: Driver Distraction by Age Group, 2013-2017

To get a better sense of the stratification of the type of driver distraction, age groups provide a clearer view of driver behavior in a distraction-affected crash. Table 30 displays driver distraction across six age groups. The first thing that stands out is the double-digit numbers associated with the aged 60 and older drivers for 'distraction/inattention' and 'inattention (inattentive)'.

Drivers under the age of 30 accounted for 60% of cell phone-related distractions. Overall, those under age of 30 were involved in 38% (55 of 146) of all distraction-affected crashes.

Where, when and how are distraction-affected fatal crashes happening? In the map below, most of the towns with multiple crashes are near the metro regions of Boston, Springfield, and Worcester as well as in Bristol County. Both Bristol and Worcester Counties reported 23 fatal crashes from 2013-2017.

**Distraction-Affected Fatal Crashes
2013-2017**

Top communities for distraction crashes were Brockton (7), Boston (5), Dartmouth (5), Springfield (5), and Worcester (5).

Given that distracted driving results in a driver taking his/her eyes off the road in front of him/her, one would think rear-end collisions would be the most frequent type of collision in a distraction-affected fatal crash. Oddly, the data from 2013-2017 does not support this hypothesis. In fact, 60% of all distraction-affected crashes occurred without a collision with another motor vehicle. Rear-end collisions (or front-to-rear) were the third most frequent collision behind angle and no motor vehicle involved.

County	No Collision with MV	Front-to-Rear	Front-to-Front	Angle	Sideswipe Same Direction	Total
BARNSTABLE	4	2	1	1	0	8
BERKSHIRE	6	0	0	2	0	8
BRISTOL	14	3	3	3	0	23
DUKES	0	0	0	0	0	0
ESSEX	2	2	0	1	0	5
FRANKLIN	2	0	0	0	0	2
HAMPDEN	12	1	1	2	0	16
HAMPSHIRE	6	0	0	2	1	9
MIDDLESEX	6	2	0	2	0	10
NANTUCKET	1	0	0	0	0	1
NORFOLK	6	3	1	2	1	13
PLYMOUTH	10	3	5	4	0	22
SUFFOLK	5	1	0	0	0	6
WORCESTER	14	2	3	4	0	23
Total	88	19	14	23	2	

Table 31: Type of Distraction-Affected Collision by County, 2013-2017

Plymouth led all counties with 55% of its distraction-affected crashes involving a collision with another vehicle. Surprisingly, Suffolk (home to Boston) had the lowest, with 17%.

Most distraction-affected crashes took place on either principal or minor arterial roads. These two roadway types accounted for over half the crashes from 2013-2017. Local roads made up 23% of the crashes. It is not surprising arterial and local roads make up the bulk of distracted driving crashes as these roadways tend to have traffic signals and stop signs –

places where drivers can easily get distracted while waiting for a light to change or for the person ahead of them to move. Furthermore, these roadways tend to have lower speed limits

Roadway Type	Total Fatal Crashes	Percent of All Fatal Crashes
Interstate	19	13%
Freeways/Expressways	7	5%
Principal Arterial	36	25%
Minor Arterial	38	26%
Major Collector	13	9%
Minor Collector	0	0%
Local	33	23%
Total	146	

Table 32: Distraction-Affected Fatal Crashes by Roadway Types, 2013-2017

and studies have shown distracted driving, especially when using an electronic device, results in drivers slowing down rather than speeding up to focus on the distraction. Of the 146 crashes from 2013-2017, only 31 (21%) involved speeding. For comparison, speed-related crashes during the same period accounted for nearly a third of all crashes.

When are these crashes occurring? Data from 2013-2017 reveals that nearly 70% of crashes take place between 9 am and 9 pm and Friday is the top day for crashes. Over three-fourths of crashes that day took place between 9 am and 9 pm. Saturday, surprisingly, had the lowest total for crashes. Distracted driving crashes taper off during the evening and early morning hours with 21% of crashes happening between 9 pm and 6 am.

	Sun	Mon	Tue	Wed	Thu	Fri	Sat	Total
12am - 2:59am	4	2	0	2	0	1	3	12
3am - 5:59am	1	2	0	0	1	2	0	6
6am - 8:59am	1	4	4	5	1	1	0	16
9am - 11:59am	3	3	2	2	2	8	2	22
12pm - 2:59pm	5	3	5	5	5	5	1	29
3pm - 5:59pm	4	3	1	5	2	6	1	22
6pm - 8:59pm	2	5	6	1	3	7	1	25
9pm - 11:59pm	3	1	1	1	0	4	3	13
Total	23	23	19	21	14	34	11	

Table 33: Distraction-Affected Fatal Crashes by Time and Day, 2013-2017

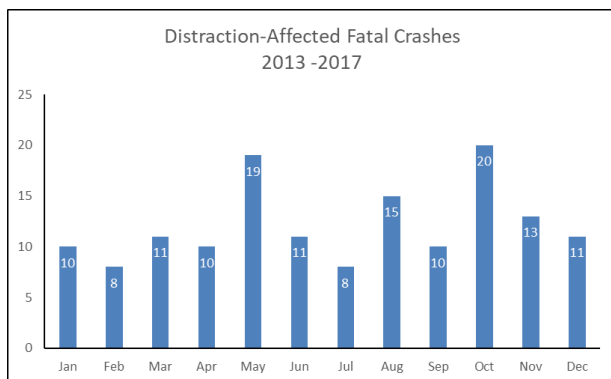


Figure 27: Distraction-Affected Fatal Crashes by Month, 2013-2017

The last data element to examine regarding distracted driving crashes is by month. Three months stand out – May, August, and October. May is puzzling as it is the month following the annual nationwide Distracted Driving Awareness Month of April. Although the communications and heightened enforcement campaigns seem to work well during April, the effects appear to diminish by May. OGR plans to extend messaging about distracted driving beyond April to better cement awareness of the dangers inherent in driver inattentiveness.

Further analysis is needed to determine what factors may be leading to increased crashes in both August and October. One possible factor in October could be less light in the evening with darkness falling sooner. Drivers could be distracted by the headlights of other cars or may have trouble making out signs due to decreased light resulted in eyes not focused on the roadway.

While distraction-affected fatal crashes have fluctuated in recent years, they have dropped 43% from 2013 to 2017. Despite this positive trend, the whole picture of distracted driving is incomplete. Determining if a driver was distracted at the time of the crash is extremely difficult for law enforcement investigators. Without eyewitnesses, a driver could easily lie about what he/she was doing prior to the crash to avoid any fines or penalties. A driver may honestly not recall what he/she was doing due to shock or a head injury. In general, the reported number of crashes involving distraction-affected drivers should be higher than it is, and OGR will work with partners in FFY 2020 to more effectively spread the message on the dangers of distracted driving. Furthermore, law enforcement involved in the distracted driving enforcement planned activities (DD-

20-02, DD-20-03) will conduct overtime activities during the key hours and days detailed in this section as well as along high volume arterial and local roads across the state.

Performance Measure for Program Area

Number of distraction-affected fatal crashes

Planned Programming

DD-20-01 Distracted Driving Media

OGR will develop and implement a statewide paid and earned media campaign which will highlight the dangers of distractions, state laws, and the work of local and MSP to deter distracted driving. Media will run in support of the April 2020 state and local enforcement mobilization and the September 2020 MSP mobilization. OGR will analyze state and local crash and fatality data as well as research on mobile and app usage trends, to identify the target audience(s) and the appropriate media to reach them. Public outreach will extend beyond the mobilizations to ensure the message is active during periods when fatal distracted crashes spike.

OGR will continue to message to the parents of teen drivers age 15-19 as this age group represents one of the largest proportions of drivers distracted at the time of fatal crashes. Paid and earned media funds will highlight the dangers of distractions during the "100 Deadliest Days" from Memorial-Labor Day.

OGR will contract with a marketing and advertising vendor.

Internal policies will be followed noting that all media and communications activities should be in support of data-driven objectives and in coordination with other activities and programs, in particular, enforcement. Crash and citation data will be used not only for planning enforcement activities but also to determine the target audiences and media channels used to reach that audience. NHTSA's guidelines will be followed for messaging, demographics, best practices and target groups for each media effort.

Projected Budget: \$ 250,000

Countermeasure Strategy Justification: *Communication Campaign*

Public outreach, whether by radio, television, outdoor displays or social media, is necessary to spread the message of paying attention to the road ahead while behind the wheel. OGR sees media campaigns for distracted driving as having a two-fold impact: 1) to support and enhance the importance of attentive driving during the planned distracted driving enforcement mobilization in April 2020; and, 2) to continue reminding Massachusetts drivers of the dangers involved in using cell phones while behind the wheel.

DD-20-02 MSP Distracted Driving Enforcement

The MSP will conduct distracted driving law enforcement during April 2020, Distracted Driving Awareness Month, using internal RAMS data to determine the appropriate days, times, and locations. The April campaign will coincide with the

distracted driving mobilization period conducted by local police departments participating in the Traffic Enforcement Grant program.

MSP will employ several trusted high-visibility strategies such as spotter techniques, roving marked and unmarked cruisers, and SUVs, as well as stationary vehicles. Since distracted driving is associated with driving behaviors such as operating at inappropriate speeds, slow reaction time, and weaving among traffic, these behaviors will receive special attention during enforcement periods. A second distracted driving enforcement campaign is planned for September 2020 as schools reopen.

Projected Budget: \$ 500,000

Countermeasure Strategy Justification: *High-Visibility Cellphone/Text Messaging Enforcement*

The objective of this countermeasure is to deter electronic device use by increasing the perceived risk of a ticket. The high visibility approach combines law enforcement with paid and earned media supporting the enforcement activity. Enforcement officers will seek out drivers actively using or looking at their phones while driving, either through assigned patrols or having a ‘spotter’ reporting usage to an officer at a location further up the road. During FFY 2020, the MSP will participate in a coordinated effort to make the general public aware of the dangers of distracted driving as well as increasing awareness of the possibility of receiving a ticket for violating the law regarding electronic device usage while driving.

From 2013 to 2017, 13% of all ‘distraction-affected’ fatal crashes in Massachusetts occurred on interstates and 25% on principal arterial roads. MSP will focus its resources along those roadways within the key time frame of 9 am – 6 pm in which half of all distracted driving crashes occur.

High visibility enforcement activities have been shown to be an effective countermeasure to increase awareness among drivers and passengers. OGR sees the combination of enforcement and education through a targeted media campaign as the best use of funding to impact a high percentage of the driving population in Massachusetts.

DD-20-03 Local Police Distracted Driving Enforcement

Provide overtime funds to local police departments to conduct enforcement of distracted driving laws, planned for April of 2020 during the national Distracted Driving Awareness Month. Not only will enforcement patrols seek out violators who use cellphones and other electronic devices while driving, but also those who exhibit associated distracted driving behaviors such as operating at an inappropriate speed, slow reaction times, and weaving among traffic. Patrols will be conducted during high-risk times and locations based on the latest available state and local data.

The 2020 eligible subrecipients list will be based on overall crash rates, VMT, crashes per VMT, fatal crashes per VMT, and percentage of fatal crashes related to speed.

Although not finalized, the number of eligible departments is estimated to be approximately 171.

Projected Budget: \$ 373,200

Countermeasure Strategy Justification: *High Visibility Cellphone/Text Messaging Enforcement*

The objective of this countermeasure is to deter electronics use by increasing the perceived risk of a ticket. The high visibility approach combines law enforcement with paid and earned media campaigns supporting the enforcement activity.

Enforcement officers will seek out drivers actively using, or looking at their phones while driving, either through assigned patrols or having a ‘spotter’ reporting usage to an officer at a location further up the road. During FFY 2020, local police departments will participate in a coordinated effort to make the general public aware of the dangers of distracted driving as well as increasing the awareness of the risk of receiving a ticket for violating the law regarding electronic device usage while driving.

From 2013 to 2017, a quarter of Massachusetts municipalities (94 or 351) experienced at least one fatal ‘distraction-affected’ crash. OGR will encourage eligible departments from high incidence towns including Brockton, Boston, Dartmouth, Springfield, and Worcester to apply for funding. Towns within Bristol and Worcester County – the two leading counties for crashes - will also be contacted and encouraged to apply for funding.

High visibility enforcement activities have been shown to be an effective countermeasure to increase awareness among drivers and passengers. OGR sees the combination of enforcement and education through a targeted media campaign as the best use of funding to impact a high percentage of the driving population in Massachusetts.

DD-20-04 Higher Education Distracted Driving Media Program

Provide grant funds to a college or university to develop a seat belt media campaign that resonates with younger drivers. The competitive grant award will be given to an academic department such as journalism, marketing, or one related to video/advertising production. It will be required that a department faculty member oversees the project including paying for student stipends, supplies, production costs, and travel. The university will not be reimbursed for faculty salary or related costs. NHTSA funds will pay for student stipends. NHTSA funding will also be used for program-related supplies, production costs, and travel costs incurred by students and faculty.

The intent is to generate messaging that is conceptualized, developed, produced, and disseminated by young people to their peers. The end product(s) may be disseminated via social or earned media. The student workers will be given day-to-day guidance from the faculty member and also be able to work with the OGR staff and media vendor for additional direction. It is hoped that the end product(s) will be accepted by the target audience as peer-to-peer messaging as opposed to government messaging.

Projected Budget: \$ 10,000

Countermeasure Strategy Justification: *Communication Campaign*

OGR sees media campaigns for distracted driving as having a two-fold impact: 1) to support and enhance the importance of keeping one’s eyes on the road when driving during the planned distracted driving enforcement mobilization in April 2020; and, 2) to continue reminding Massachusetts drivers of the dangers involved in using cell phones while behind the wheel.

Tapping college or university students to develop and deliver distracted driving messaging will help OGR disseminate information that is better tailored for young drivers (those under 25 years of age). Having young adults involved will lead to a campaign that will resonate with their peers. With well over 30% of distracted driving fatal crashes involving a driver under 25, this planned activity will help increase awareness among that age group and consequently lower distracted driving crashes.

DD-20-05 Community-Based Distracted Driving Grant Program

Competitive grant awards will be provided to one or more organizations such as Girl Scouts, Boy Scouts, PTOs, schools, faith-based and advocacy groups, etc., that will implement community-based programs. The eligible applicants may include both non-profit 501(c)(3) or governmental agencies.

This planned activity will consist of one or more data-driven competitive grant programs that will be focused in geographical areas and/or high-risk populations that have a demonstrated need in the area of distracted driving.

The programs will generally be focused on raising awareness of road safety, training, and changing social attitudes and behaviors in order to reduce crashes and associated fatalities, injuries and economic losses.

This will not be a traffic enforcement program, but OGR will encourage applicants to develop new or enhance existing partnerships with law enforcement agencies to achieve project goals.

Selected grant subrecipients will develop and implement traffic safety improvement educational and awareness programs that address issues in their communities. Programs that focus on high-risk groups or behaviors will be prioritized. Organizations will be encouraged to build partnerships that incorporate a whole-community, data-driven approach to identifying and addressing road safety problems. The formation of community-wide road safety coalitions that bring together a wide constituency to focus on aspects of road safety will also be encouraged.

Projects that will develop and implement an educational curriculum that aims to install a life-long road safety culture in the Commonwealth's citizenry will also be prioritized. Projects may also incorporate social, and/or traditional media strategies to change risky behavior on the state's roadways.

The competitive grant solicitation may guide potential applicants to various informational resources such as:

- National Highway Traffic Safety Administration
- Centers for Disease Control and Prevention
- Governors Highway Safety Association
- Insurance Institute for Highway Safety
- National Safety Council
- American Automobile Association
- The Vision Zero Network
- Mothers Against Drunk Driving
- Students Against Destructive Decisions

Projected Budget: \$ 25,000

Countermeasure Strategy Justification:

Communication Campaign

OGR sees media campaigns for distracted driving as having a two-fold impact: 1) to support and enhance the importance of keeping one's eyes on the road when driving during the planned distracted driving enforcement mobilization in April 2020; and, 2) to continue reminding Massachusetts drivers of the dangers involved in using cell phones while behind the wheel.

Tapping local community organizations or agencies to develop distracted driving programs will help OGR more effectively engage local communities in addressing their specific distracted driving issues. With over 20% of distraction-affected fatal crashes occurring on local roads, this planned activity will help decrease distracted driving safety at the municipal level.

DD-20-06 Program Management – Distracted Driving

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, and postage and office supplies.

Projected Budget: \$ 112,942

Countermeasure Strategy Justification: *OGR Program Management*

The day-to-day operation of OGR requires funding to allow staff to properly oversee the distracted driving safety program. Lack of oversight due to reduced or no funding could lead to increased speed-related fatalities on the roadways of Massachusetts.

Program Area: Traffic Records (TR)

Traffic records data are vital to the analysis necessary for successful highway safety planning and programming. Our agency, in coordination with our partners, collects and uses traffic records data to identify problem areas, develop and implement appropriate programs, and evaluate the effectiveness of these programs.

Massachusetts operates a complete set of systems to receive, store, and manage traffic records information. These systems are managed by the following agencies:

- MassDOT/RMV
 - Crash
 - Driver history
 - Vehicle registration systems
- Merit Rating Board
 - Operator driving history records consisting of at-fault crash claim records, comprehensive claim records, out-of-state incidents as well as civil and criminal traffic citation information
- Administrative Office of the Trial Court
 - Adjudication information.
- MassDOT Office of Transportation Planning
 - Road inventory file
- Massachusetts Department of Public Health and the Center for Health Information and Analysis
 - Emergency medical/injury surveillance related information systems.

As required by NHTSA's Section 405c grant program, Massachusetts has an active two-tiered Traffic Records Coordinating Committee (TRCC), which is supported by a Traffic Records Program Coordinator located within the Office of Grants and Research's Highway Safety Division. The Executive-level TRCC, chaired by the EOPSS Undersecretary of Forensic Science and Technology, was established through the coordinated efforts of its member organizations. The ETRCC is comprised of agency heads or senior personnel who set the vision and mission for a Working-level TRCC. The Working-level TRCC is the primary means by which communication is facilitated and perpetuated between the various users and collectors of data, and owners and custodians of the data systems that make up the Commonwealth's traffic records systems. These TRCCs foster understanding among stakeholders and promote the use of safety data in identifying problems and developing effective countermeasures to improve highway safety. Both committees seek to improve the accessibility, accuracy, completeness, uniformity, integration, and timeliness of the six traffic records systems in Massachusetts: citation/adjudication, crash, driver, EMS/injury surveillance, roadway, and vehicle. One way this is accomplished is by having the TRCCs ensure that all Section 405-c funds received by Massachusetts are used for eligible, prioritized projects that will enhance these systems.

The FFY 2020 Section 405-c application and FFY 2020 Strategic Plan for Traffic Records Improvements contain details pertaining to the current capabilities and challenges of the Massachusetts traffic records systems. These also describe the progress made to date on projects. The FFY 2020 Strategic Plan for Traffic Records was submitted in June 2019.

Although Traffic Records' performance targets are not among the core performance measures required by NHTSA, these targets (shown below) allow the TRCC to monitor progress made as well as provide key statistics for inclusion in the yearly Strategic Plan.

Performance Measures for Program Area

Performance Target #1:

To develop a business plan for a new MassTRAC and have it approved by the TRCC by December 31, 2019.

Performance Target #2:

To improve the accuracy and completeness of the RMV Crash Data System by decreasing the number of crash reports rejected for not meeting the minimum criteria to be accepted into the system from 1,466 between April 1, 2018 and March 31, 2019 to 1,390 or less between April 1, 2019 and March 31, 2020.

Performance Target #3:

To improve the completeness of the Massachusetts Department of Public Health's Massachusetts Ambulance Trip Record Information System (MATRIS) by increasing the number of ambulance services submitting NEMSIS Version 3 reports to the system from 8 between April 1, 2018 and March 31, 2019 to 220 or more between April 1, 2019 and March 31, 2020.

Countermeasure Strategies to be Implemented

Traffic records-related planned activities are aimed at making core highway safety data accessible, accurate, timely, integrated, uniform, and complete. The countermeasures listed in NHTSA's *Countermeasures That Work, 9th Edition* do not apply to traffic records projects. Each planned activity provided below has an overarching goal of improving the quality of data that will be accessible by traffic safety agencies and stakeholders in Massachusetts and help improve resource management and fund allocation by accurately highlighting 'hot spots' and areas of concern in a timely manner.

These are the six 'countermeasure' strategies that apply to traffic records projects for FFY 2020:

- Improves timeliness of a core highway safety database
- Improves integration between one or more core highway safety databases
- Improves completeness of a core highway safety database
- Improves accuracy of a core highway safety database
- Improves accessibility of a core highway safety database
- Improves uniformity of a core highway safety database

Each strategy is straight-forward and self-explanatory. The TRCC will not approve any project that does not have a goal of improving the traffic records system in one of these ways.

Planned Programming**TR-20-01 MassTRAC**

Funding will be used by OGR to secure a vendor(s) to develop and support a new MassTRAC system to reside within the open source environment of Mass.gov. Like its predecessor, the new MassTRAC will be a web-based solution for traffic records analysis, mapping, and reporting. In addition to the crash and citation data sets of its predecessor, the new tool is anticipated to also include driver, EMS/injury surveillance, roadway, and vehicle data sets. The new MassTRAC would help OGR meet federal reporting requirements and support safety planning processes across the Commonwealth, for key stakeholders and even the general public. The new system would provide quick and easy user access to its raw data, to basic and higher data analytical functions, and data visualization/mapping tools. At this point, it is anticipated the new MassTRAC will be based on the model of the upgraded MassDOT Crash Portal expected to launch in summer 2019. One of the recommendations of the 2019 Traffic Records Assessment was to improve the traffic records systems capacity to integrate data.

This task will support traffic records performance target 1.

Projected Budget: \$ 425,000

Countermeasure Strategy Justification: *Improves accessibility and integration of one or more core highway safety databases*

TR-20-02 FARS

NHTSA will be provided, through a dedicated RMV position, with the fatal crash data for FARS and FastFARS required in the NHTSA-OGR cooperative agreement. The FARS Analyst will collect and process data concerning motor vehicle-related fatalities, utilizing all available resources, in order to develop a database sufficient to meet federal requirements. This project will improve the data quality control program for the crash data system as recommended in the 2019 Traffic Records Assessment.

This task supports performance target 2.

Projected Budget: \$ 82,000

Countermeasure Strategy Justification: *Improves completeness of a core highway safety database*

TR-20-03 MACCS

MACCS is a browser-based application available statewide for the purpose of collecting, reconciling, and exchanging motor vehicle incident information including electronic citation reporting, crash reporting, and traffic stop data collection. The MACCS project is the result of a partnership between EOPSS, local and state law enforcement, and MassDOT. The project has been funded with a combination of capital funds and grants from NHTSA. This project will increase the data quality of the crash and citation systems as called for in the 2019 Traffic Records Assessment.

The goals of the MACCS project are to ensure greater officer and citizen safety by making the reporting process more efficient at the roadside, improve data quality by implementing checks at the point of entry and upon submittal, and eliminate redundant data entry processes for agencies across Massachusetts.

The MACCS pilot commenced in July 2013 to field test the application and in-vehicle hardware (i.e. scanners, printers), identify deficiencies and potential improvements, and support proactive planning in the future potential roll-out of the MACCS system statewide. The MACCS application first went live with Billerica Police Department in April 2017.

In the past year, grant funding assisted with procurement and installation of in-vehicle printers, mounts, and paper, associated training, and MACCS software updates. As of spring 2019, there are 43 local police departments and the MSP using MACCS.

Next Steps:

- Further deployment of and training on MACCS and associated printers with up to 50 additional law enforcement agencies in FFY 2020.

- Continue working with the courts and Merit Rating Board on outstanding issues related to the processing of criminal citations, including an electronic integration of MACCS with the Electronic Application for Criminal Complaint.
- Work with record management system vendors to implement a data exchange via the iCJIS Broker technology.

This task will support performance target 2.

Projected Budget: \$ 2,161,000

Countermeasure Strategy Justification: *Improves accuracy, completeness, timeliness, and uniformity of one or more core highway safety databases*

TR-20-04 Projects to be approved by TRCC

An Availability of Grant Funding (AGF) will be issued to provide FFY 2020 Section 405-c funding on a competitive basis to measurable projects to improve the accessibility, accuracy, completeness, integration, timeliness, and/or uniformity of one or more of the following six core traffic records systems: crash, roadway inventory, vehicle registration/title, driver history, citation/adjudication, and EMS/injury surveillance system. Improving these systems will, in turn, enhance the ability to identify priorities for local, state, and federal traffic safety programs. Permissible projects could also evaluate the effectiveness of efforts to improve these six systems; link these systems with other appropriate state or federal data systems; improve compatibility and interoperability of state data systems with national systems and those in other states; and enhance the ability of highway safety stakeholders to observe and analyze local, state, and national trends in crash occurrences, rates, outcomes, and circumstances. Only units of state and local government or not-for-profit organizations with a public purpose would be eligible to apply for funding. All funded projects must work to meet at least one unmet recommendation(s) from the Commonwealth's 2019 Traffic Records Assessment. Preference will be given to projects that have a minimum of one benchmark and performance measure that will demonstrate at least one quantitative improvement to a performance attribute of a minimum of one of the state's six core systems. This quantitative improvement must be demonstrated with supporting information covering a 12-month performance period, starting anytime between April 1 and July 1, 2019, and comparable to a prior, contiguous benchmark period of one year. AGF responses would be reviewed by the Massachusetts Traffic Records Coordinating Committees. Those approved by the committees would then be submitted to EOPSS and then NHTSA for review and approval. Each resulting project will support one or more performance targets.

Projected Budget: \$ 755,000

Countermeasure Strategy Justification: Improves completeness of a core highway safety database

TR-20-05 Law Enforcement Liaison for Crash Data System

This project will provide funding for the RMV CDS Law Enforcement Liaison (LEL). The LEL will be in regular contact with state and local police on ways they can improve their reporting to the CDS, in particular, to move from paper to electronic reporting. The LEL will also work with records management system vendors for police departments to improve reporting to the CDS. Other stakeholders the LEL would connect with would be major data users and those working to improve police training curriculum. This project, approved by the Massachusetts Traffic Records Coordinating Committees, will improve the data quality control program for the CDS as recommended in the 2019 Traffic Records Assessment.

This task will support traffic records performance target 2.

Projected Budget: \$108,020

Countermeasure Strategy Justification: *Improves accuracy, completeness, timeliness, and uniformity of a core highway safety database*

TR-20-06 Tools for Improving Crash Reports Reviews Project

Funding unspent in FFY 2019 will enable UMassSafe to continue to build on an earlier successful project, Crash Data Audit, to identify and then implement improvements to the supervisory review of crash reports before submission to RMV. This funding, if approved by the Massachusetts Traffic Records Coordinating Committees, will enhance accuracy, completeness, and uniformity of the CDS. This project will improve the data quality control program for the crash data system as recommended in the 2019 Traffic Records Assessment. This task will support traffic records performance target 2.

Projected Budget: \$166,768

Countermeasure Strategy Justification: *Improves accuracy, completeness, and uniformity of a core highway safety database*

TR-20-07 MATRIS and Trauma Registry Enhancements

This project will continue to enhance the accuracy, completeness, integration, timeliness, and/or uniformity of the Massachusetts Ambulance Trip Record Information System (MATRIS) and the Trauma Registry (TR). Key MATRIS deliverables would be complete migration of MATRIS data providers to NEMSIS Version 3, necessary updates to this software, and exploration of better hosting options for MATRIS V3. Major TR deliverables would be the advancement of the procurement process for a commercial-off-the-shelf system for a new TR application, related configuration/testing, as well as better data quality reporting and linkage efforts for the TR. This project, approved by the Massachusetts Traffic Records Coordinating Committees, will help to improve the data quality program for the EMS/Injury Surveillance System.

This task will support traffic records performance target 3.

Projected Budget: \$ 175,000

Countermeasure Strategy Justification: *Improves accuracy, completeness, integration, timeliness, and uniformity of a core highway safety database*

TR-20-08 MATRIS and Trauma Registry National Standard Uniformity and Data

With funding unspent in FFY 2019, the project will continue to enhance the accessibility, accuracy, completeness, integration, timeliness, and uniformity of the Massachusetts Ambulance Trip Record Information System (MATRIS) and the Trauma Registry. This funding, approved by the Massachusetts Traffic Records Coordinating Committees, will help to

meet recommendations from the 2019 Traffic Records Assessment to continue to grow and promote MATRIS and the Trauma Registry, in particular by improving the data quality program of the EMS/injury surveillance system. This task will support traffic records performance target 3.

Projected Budget: \$ 414,779

Countermeasure Strategy Justification: *Improves accessibility, accuracy, completeness, integration, timeliness, and uniformity of a core highway safety database*

TR-20-09 Boston Cyclist, Pedestrian and Vehicular Incident Information System

In the latest phase of this on-going project, Boston EMS will continue to promptly vet and validate roadway incidents involving bicyclists and pedestrians, enhance documentation of relevant data points, build upon just-in-time and canned reporting capabilities, and disseminate findings to inform injury prevention efforts. This project will continue to collaborate between Boston EMS, Boston Police Department, and Boston Department of Innovation Technology to enhance integration and reporting of related data. All these efforts will enhance the city's on-going efforts to improve public awareness of and infrastructure improvements for greater bicyclist and pedestrian safety. An annual report on roadway incidents involving bicyclists and pedestrians documented by Boston EMS through this project will continue. This project, approved by the Massachusetts Traffic Records Coordinating Committees, will improve the data quality control program for the EMS/injury Surveillance system as recommended in the 2019 Traffic Records Assessment.

This project will address traffic records performance target 3.

Projected Budget: \$ 91,981

Countermeasure Strategy Justification: *Improves accuracy of a core highway safety database*

TR-20-10 Program Management – Traffic Records

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, and postage and office supplies.

Projected Budget: \$ 92,736

Countermeasure Strategy Justification: *OGR Program Management*

The day-to-day operation of OGR requires funding to allow staff to properly oversee the traffic records program. Lack of oversight due to reduced or no funding could lead to increased speed-related fatalities on the roadways of Massachusetts.

Program Area: Police Traffic Services (PT)

The overarching goal of Police Traffic Services is to help reduce traffic fatalities across the state. Better educated law enforcement members and judiciary personnel will improve approaches to traffic safety as well as address legal issues surrounding such situations as pulling over suspected OUI alcohol or drug-impaired drivers. Some prior year activities under PT included, but were not limited to:

- Police training classes focused on crash reconstruction, LiDAR, and speed management.
- Supporting a part-time Law Enforcement Liaison (LEL) to improve communications between OGR and local police departments.
- Supporting a Traffic Safety Resource Prosecutor (TSRP) to update the Massachusetts OUI Prosecutors Manual, which will help prosecutors, judges, and law enforcement better understand the legal complexity of a successful OUI prosecution.
- Establishing a State Judicial Outreach Liaison (SJOL) position to help increase awareness and expertise amongst judges who handle OUI court cases.
- Funding for outreach to local high schools on the dangers of speeding, impaired driving, and failure to wear a seat belt.
- Utilizing data analyst expertise to uncover key trends in the MSP Crash Data System (RAMS).

Through these planned activities, OGR aims to lower traffic fatalities across the Commonwealth by improving the knowledge base of traffic safety stakeholders involved in each aspect of law enforcement, from enforcement on the roadways to prosecution in the courtrooms. The more informed law enforcement members are the better they will be at detecting and removing unsafe drivers from the road before they cause any harm.

Performance Measure for Program Area

C-1 Number of traffic fatalities

Planned Programming**PT-20-01 MPTC – Municipal Police Training**

Provide funding to MPTC to conduct up to 29 classes for municipal police departments to improve enforcement of laws pertaining to current traffic safety issues such as speeding, pedestrian and bicyclist safety, and distracted driving. Topics will include Traffic Crash Investigation, Advanced Traffic Crash Investigation, Crash Reconstruction Investigation, Speed Measurement, Radar Operator and LiDAR training. MPTC will offer trainings with the newly released 2018 Speed Measurement Training Manuals from NHTSA. Training courses will take place at various police departments across the Commonwealth throughout the year.

Projected Budget: \$ 157,000

Countermeasure Strategy Justification:***Police Training Supporting Enforcement***

Funding for MPTC will allow the agency to offer numerous training classes for municipal police departments to attend related to speeding, pedestrian and bicyclist safety, and distracted driving. Topics include, but are not limited to, Advanced

Crash Investigation and Speed Measurement. Increased knowledge by law enforcement on these key topics will lead to improved and more focused policing by officers, whether on patrol or assisting with a traffic checkpoint.

PT-20-02 Law Enforcement Liaison (LEL)

Provide funding to support an LEL and associated activities including expenses for travel to attend meetings, training, and conferences in support of traffic safety issues including but not limited to impaired and distracted driving, and occupant protection. National conferences may include the International Association of Chiefs of Police Conference and the Lifesavers Conference. Funding will also be used to cover the cost of local travel as needed to meet with local law enforcement and other traffic safety stakeholders.

Projected Budget: \$ 60,000

Countermeasure Strategy Justification: *Police Training Supporting Enforcement*

Funding for the LEL position will help OGR better communicate with local police departments and other traffic safety stakeholders. By improving communication channels all agencies with traffic safety concerns will be on the same page regarding shared goals. Furthermore, OGR will be better positioned to assist local and MSP with traffic fatality data to help drive enforcement patrols and messaging in their respective communities.

PT-20-03 MDAA / TSRP

Funds will be used to support the Traffic Safety Resource Prosecutor's (TSRP) activities associated with conducting trainings and conferences, providing technical assistance, and creating and maintaining vehicular crime resources for prosecutors and law enforcement.

The vehicular crime database/resource is for prosecutors and law enforcement to utilize in the court of law. Providing a database of vehicular crimes will assist prosecutors in handling cases, especially those involving impaired driving.

Funding the TSRP will help reduce the number of impaired driving fatalities on the roadways of Massachusetts. The more prosecutors and law enforcement know about drivers involved in impaired driving crashes, the better they can adjudicate and mete out punishment for offenders.

The planned TSRP responsibilities dealing with impaired driving and motor vehicle-related issues include:

- Train the Commonwealth's prosecutors and, subject to resources, other professionals in the criminal justice field including law enforcement officers and the judiciary
- Electronically alert prosecutors, law enforcement and other criminal justice professionals to changes in statutory and case law regarding motor vehicle crimes
- Maintain a database of vehicular crimes-related expert witness transcripts
- Create and maintain the vehicular crimes pages and resources on MDAA's Mass.gov public website and its secure intranet site, MDAA.net
- Continue to update the Massachusetts Prosecutors OUI Manual
- Monitor legislation in conjunction with MDAA's Special Counsel
- Provide technical assistance to prosecutors and, subject to resources, law enforcement officers, the judiciary, and other state and local agencies

- Act as a liaison between prosecutors and other stakeholder entities including the Executive Office of Public Safety and Security, Mothers Against Drunk Driving, the Massachusetts Judicial Institute, the MPTC, and the Administrative Office of the Trial Court

Projected Budget: \$ 205,000

Countermeasure Strategy Justification: *Innovative*

Although there is not a specific countermeasure strategy for a TSRPs defined in the “Countermeasures That Work, Ninth Edition, 2017 (CTW)” publication, NHTSA recognized the value of these positions and developed a manual to assist new TSRPs (NHTSA, 2007b). This publication is referenced in the CWT.

A TSRP conducts training, provides technical assistance to prosecutors and law enforcement personnel to utilize in the court of law.

PT-20-04 MSP Law Enforcement Liaison (LEL)

Provide funds to MSP for training and travel-related expenses for the LEL to attend meetings, training and national conferences in support of major traffic safety issues including but not limited to impaired and distracted driving, occupant protection and drug recognition expert training. National conferences will include the International Association of Chiefs of Police Conference in the fall 2019 and the Lifesavers Conference in spring 2020. Funding will also be used to cover the cost of local travel for the LEL to attend meetings and training with local law enforcement and other traffic safety stakeholders.

Projected Budget: \$ 7,000

Countermeasure Strategy Justification: *Police Training Support Enforcement*

Funding for the MSP LEL position will help OGR better communicate with MSP and develop a shared vision of improving traffic safety. Furthermore, the MSP LEL will mitigate the flow of information between the six MSP Troops and OGR which will lead to a clearer understanding of the traffic safety issues occurring on the state highways and roads of the Commonwealth.

PT-20-05 Enhance State Judicial Training and Awareness

Funding will be provided to the Massachusetts Executive Office of the Trial Court- Judicial Institute, and/or the Massachusetts Bar Association to enhance coordinated educational services, skills training, and professional development for judicial and non-judicial personnel that will specifically focus on the adjudication of impaired driving cases. This will be accomplished through training and/or conferences.

Funded activities may include awareness training about DWI courts and how they could potentially benefit the Commonwealth. These specialty courts are dedicated to changing the behavior of offenders through intensive supervision and treatment. According to the National Association of Drug Court Professionals (2015), there are 726 DWI courts in the U.S. A DWI Court’s underlying goal is to change offenders’ behavior by identifying and treating their alcohol and/or drug problems and holding offenders accountable for their actions. According to a National Center for DWI Courts (NCDC) fact sheet, DWI court participants are 19 times less likely to re-offend (Carey, S., Fuller, B. & Kissick, K. (2008). Michigan DUI Courts Outcome Evaluation: Final Report. Portland: NPC Research).

Other research shows that DWI courts can reduce recidivism by 66% (Mitchell, O., Wilson, D.B., Eggers, A. & MacKenzie, D.L. (2012). Assessing the effectiveness of drug courts on recidivism: A meta-analysis review of traditional and nontraditional drug courts. *Journal of Criminal Justice*, 40(1)).

According to the National Highway Traffic Safety Administration, impaired driving cases can be highly complex and difficult to adjudicate, and many judges said the training and education they received prior to assuming their position was inadequate for preparing them to prosecute and preside over such cases (Robertson & Simpson, 2002a). This funding will help bridge gaps in training and promote fair legal outcomes for the Commonwealth, victims and loved ones of impaired driving crashes, and the defendants.

Additionally, an increasing number of law enforcement officers in Massachusetts are being trained and certified in using enhanced techniques in detecting alcohol and drug use in drivers. These certifications for Drug Recognition Experts (DRE) and Advanced Roadside Impaired Driving Evaluation (ARIDE) result in a cadre of subject matter experts that can provide invaluable expert testimony in impaired driving cases. These additional funds will provide judges and court personnel with additional opportunities to become more familiar with these proven evaluation techniques and learn how they can improve communication, performance, service, and the administration of justice in the court system.

In addition to alcohol-related cases, Massachusetts judges also must preside over drug-related traffic cases as well. This is important to note given the state's recent legalization of retail sales of marijuana for both medical and recreational use, and the ongoing deadly consequences of opioid-impaired drivers. This funding will help ensure that Massachusetts judges have up-to-date information about the impacts that alcohol and drugs have on drivers, motorcyclists, bicyclists, and pedestrians.

Projected Budget: \$ 150,000

Countermeasure Strategy Justification: *DWI Courts*

DWI Courts are specialized courts dedicated to changing the behavior of DWI (OUI in Massachusetts) offenders through intensive supervision and treatment. A DWI Court's underlying goal is to change offenders' behavior by identifying and treating their alcohol and/or drug problems and holding offenders accountable for their actions. With this training, OGR will help deepen the expertise and legal knowledge available to prosecutors and judges involved with the DWI Courts. This could lead to more effective treatments and/or sentencing that will further reduce the recidivism rate of offenders.

PT-20-06 MSP Young Drivers Education Program

Funds will be provided to the MSP for educating young drivers, as well as the general public, on the importance of wearing a seat belt and the dangers of impaired driving. MSP will conduct demonstrations of the Rollover Simulator, SIDNE vehicle (Simulated Impaired Driving Experience) and a Marijuana Simulation Kit at high schools, on weekends and at highly populated events in Massachusetts. This task will also provide funds for the purchase of a new Rollover Simulator, replacing the present one that is over 10 years old, and the purchase of a SIDNE vehicle upgrade to conduct demonstrations that relate to advanced automobile technology. Additionally, this task will provide funds for the purchase of a Marijuana Simulation Kit to help educate the community about the potential dangers that can result from marijuana use. Before the purchase of any equipment greater than \$5,000, prior authorization will be received from NHTSA. The MSP will abide by all Buy America Act requirements.

Depending on staff availability, MSP will make every effort to target high schools and public safety events within the top five counties for unrestrained fatalities as a percentage of all traffic-related fatalities (Franklin, Worcester, Hampden, Essex, and Norfolk) over the past five years (2013-2017). These five counties also account for half of all unrestrained fatalities reported. MSP will also target regions of high traffic-related alcohol or drug fatalities involving young drivers including Plymouth and Middlesex. At a minimum, MSP will conduct seven demonstrations across the top counties for unrestrained fatalities and alcohol-involved fatal crashes.

Projected Budget: \$ 30,000

Countermeasure Strategy Justification: *Youth Programs*

OGR has witnessed the effectiveness of youth programs in previous FFYs through its multi-year Young Drivers grant program. The Young Drivers program led to the development of positive social media messaging by the In Control Family Foundation revolving around safe driving practices by young drivers via Facebook and Instagram that reached over 200,000 people across Massachusetts. OGR is confident the MSP Young Drivers Education Program will have the same impact, especially with the implementation of rollover demonstrations and information related to the dangers of mixing marijuana (or other drugs) with driving.

PT-20-07 Program Management – Police Traffic Services

Provide sufficient staff to manage programming described in this plan as well as cover travel, professional development expenses, conference fees, postage, and office supplies.

Projected Budget: \$ 108,314

Countermeasure Strategy Justification: *OGR Program Management*

The day-to-day operation of OGR requires funding to allow staff to properly oversee the Police Traffic Services program. Lack of oversight due to reduced or no funding could lead to increased roadway fatalities because state and local law enforcement, as well as judicial branch members, would not receive timely and accurate training on issues related to impaired driving, occupant safety, speeding, and other crucial traffic safety areas.

Program Area: Planning & Administration (PA)

This section covers the Planning and Administration programming required to faithfully execute the planned activities detailed in the Highway Safety Plan. Funding is needed to support OGR staff for day-to-day operations and to comply with any and all Federal and State regulations.

PA-20-01 Administration of Statewide Traffic Safety Program

Funding to plan, implement, monitor, and evaluate programs and projects detailed in the FFY 2020 Highway Safety Plan (HSP), produce the FFY 2019 Annual Report (AR) as well as produce the FFY 2021 HSP. This task will provide the required staff salaries, professional development, travel, office space, equipment, materials, and fiscal support.

Project staff: Jeff Larason, Kevin Stanton, Fiscal Director (TBD), Diane Perrier, Denise Brown, Susan Burgess-Chin, and Annette Powell

Projected Budget: \$685,000

Countermeasure Strategy Justification: *OGR Program Management*

The day-to-day operation of OGR requires funding to allow staff to properly oversee the administration and maintenance of the statewide traffic safety program. Without funding, local and MSP will not have the financial means to properly implement additional enforcement patrols and educational outreach programs intended to lower traffic-related fatalities in Massachusetts.

PA-20-02 Americans with Disabilities Act (ACA) Compliance

Provide funds for interpretation, translation, and specialized printing services for those in need of accommodations. Also, make necessary programmatic, organizational and procedural improvements to alert the public about the availability of such accommodations.

Projected Budget: \$5,000.00

Countermeasure Strategy Justification: *OGR Program Management*

OGR currently has a hearing impaired employee and to allow the employee to fully participate and contribute to the administration of the statewide traffic safety program, funding has been set aside to utilize CART services when needed by the employee. Funding also allows for OGR to hire CART operators or sign language translators for any public forums that are put forth in FFY 2020.

Appendix A: Funding Summary of Planned Activities FFY 2020		
Planned Activity Identifier	Planned Activity Name	Budget
AL-20-01	Impaired Driving Media	\$ 650,000
AL-20-02	Local Police Impaired Driving Enforcement	\$ 1,244,000
AL-20-03	MSP Sobriety Checkpoint & Saturation Patrols	\$ 1,505,000
AL-20-04	Local Sustained Traffic Enforcement Program (STEP)	\$ 600,000
AL-20-05	MSP Sustained Traffic Enforcement Program (STEP)	\$ 309,000
AL-20-06	Judicial Education Relating to Highway Safety Strategies	\$ 18,135
AL-20-07	MSP/Office of Alcohol Testing BTO Training	\$ 125,000
AL-20-08	MSP Drug Recognition Expert (DRE) Training	\$ 40,000
AL-20-09	MPTC - Impaired Driving Law Enforcement Specialized Training	\$ 60,000
AL-20-10	MPTC - Drug Evaluation and Classification Program (DEC)	\$ 600,000
AL-20-11	ABCC - Underage Drinking Compliance Checks Program	\$ 195,000
AL-20-12	ABCC - Enforcement Program to Prevent the Sale of Alcohol to Intoxicated Persons	\$ 195,000
AL-20-13	Local Underage Marijuana Enforcement Grant Program	\$ 50,000
AL-20-14	Stakeholders Conferences	\$ 25,000
AL-20-15	Higher Education Impaired Driving Media Program	\$ 10,000
AL-20-16	Community-Based Impaired Driving Grant Program	\$ 25,000
AL-20-17	Program Management - Impaired Driving	\$ 230,393
	Subtotal AL	\$ 5,881,528
DD-20-01	Distracted Driving Media	\$ 250,000
DD-20-02	MSP Distracted Driving Enforcement	\$ 500,000
DD-20-03	Local Police Distracted Driving Enforcement	\$ 373,200
DD-20-04	Higher Education Distracted Driving Media Program	\$ 10,000
DD-20-05	Community-Based Distracted Driving Grant Program	\$ 25,000
DD-20-06	Program Management - Distracted Driving	\$ 112,942
	Subtotal DD	\$ 1,271,142
MC-20-01	Motorcycle Safety Media	\$ 100,000
MC-20-02	Motorcycle Safety Program Enhancements	\$ 150,000
MC-20-03	Program Management - Motorcycle Safety	\$ 59,755
	Subtotal MC	\$ 309,755

OP-20-01	Occupant Protection Media	\$	500,000
OP-20-02	Local Police Occupant Protection Enforcement Campaign	\$	497,600
OP-20-03	MSP Occupant Protection CIOT Enforcement Campaign	\$	450,000
OP-20-04	Local Police Sustained Traffic Enforcement Program (STEP)	\$	600,000
OP-20-05	MSP Sustained Traffic Enforcement Program (STEP)	\$	235,000
OP-20-06	Child Passenger Safety Equipment Grant Program	\$	225,000
OP-20-07	Child Passenger Safety Administration and Training	\$	170,000
OP-20-08	Child Passenger Safety (CPS) Statewide Information Line	\$	1,100
OP-20-09	Statewide Seat Belt Observation Survey	\$	150,000
OP-20-10	MSP Child Passenger Safety Car Seat Checkpoints	\$	40,000
OP-20-11	"Buckle Up" Road Signage	\$	250,000
OP-20-12	Higher Education Occupant Protection Media Program	\$	10,000
OP-20-13	Community-Based Occupant Protection Grant Program	\$	25,000
OP-20-14	Occupant Protection Program Assessment	\$	50,000
OP-20-15	Child Passenger Safety Conference	\$	15,000
OP-20-16	Program Management - Occupant Protection	\$	194,672
	Subtotal OP	\$	3,413,372
PA-20-01	Administration of Statewide Traffic Safety Program	\$	685,000
PA-20-02	Americans with Disabilities Act (ADA) Compliance	\$	5,000
	Subtotal PA	\$	690,000
PS-20-01	Pedestrian and Bicyclist Safety Media	\$	150,000
PS-20-02	Local Police Pedestrian and Bicyclist Enforcement and Equipment Program	\$	700,000
PS-20-03	Community-Based Pedestrian and Bicyclist Safety Grant Program	\$	25,000
PS-20-04	Program Management - Pedestrian & Bicyclist Safety	\$	77,102
	Subtotal PS	\$	952,102
PT-20-01	Municipal Police Training	\$	157,000
PT-20-02	Law Enforcement Liaison (LEL)	\$	60,000
PT-20-03	MDAA/TSRP	\$	205,000
PT-20-04	MSP Law Enforcement Liaison (LEL)	\$	7,000
PT-20-05	State Judicial Outreach Liaison (SJOL)	\$	150,000
PT-20-06	MSP Young Drivers Education Program	\$	30,000
PT-20-08	Program Management- Police Traffic Services	\$	108,314
	Subtotal PT	\$	717,314
SC-20-01	Speed Media	\$	150,000
SC-20-02	MSP Speed Enforcement	\$	250,000
SC-20-03	Local Speed Enforcement	\$	373,200
SC-20-04	Program Management - Speed and Aggressive Driving	\$	63,331
	Subtotal SC	\$	836,531

TR-20-01	MassTRAC	\$	425,000
TR-20-02	Fatality Analysis Reporting System (FARS)	\$	82,000
TR-20-03	Motor Vehicle Automated Citation and Crash System (MACCS)	\$	2,161,000
TR-20-04	Traffic Records Projects- TBD	\$	755,000
TR-20-05	RMV- LEL	\$	108,020
TR-20-06	Tools for Improving Crash Report Reviews	\$	166,768
TR-20-07	MATRIS and Trauma Registry Enhancements	\$	175,000
TR-20-08	MATRIS and Trauma Registry National Standard Uniformity and Data Quality Project	\$	414,779
TR-20-09	Boston Cyclist, Pedestrian and Vehicular Incident Information System Enhancement	\$	91,981
TR-20-10	Program Management- Traffic Records	\$	92,736
	Subtotal TR	\$	4,472,284
	Total FFY 2020 Projected Budget	\$	18,544,027

	FFY 2020 Program Area Funding Summary	
	Program Area	Budget
	Impaired Driving	\$ 5,881,528
	Distracted Driving	\$ 1,271,142
	Motorcyclist Safety	\$ 309,755
	Occupant Protection	\$ 3,413,372
	Planning & Administration	\$ 690,000
	Pedestrian and Byclists Safety	\$ 952,102
	Police Traffic Services	\$ 717,314
	Speed Enforcement	\$ 836,531
	Traffic Records	\$ 4,472,284
	Total FFY 2020 Projected Budget	\$ 18,544,027

FFY 2020 Program Area Funding Summary

